			LIGHTING FI	XTURE SCHEDULE					
ALL	LIGHTING FIXTURES ARE SUP	PLIED BY CIRCLE K, INSTALLED BY THE ELECTRICAL CONT	RACTOR						
TYPE	ITEM TYPE	DESCRIPTION	MANUFACTURER	MODEL	LAMP	WATTS	VOLTAGE	COMMENTS	COUNT
А	INTERIOR LIGHTING	2'x4' H.E. TROFFER	CREE	RLA-FLX24-50L-940-CRV-10V10-UNV	LED	41 W	120 V		28
AE	INTERIOR LIGHTING	2'x4' H.E. TROFFER WITH BATTERY	CREE	RLA-FLX24-50L-940-CRV-10V10-UNV-EB	LED	41 W	120 V	WITH EMERGENCY BALLAST	6
В	INTERIOR LIGHTING	6" RECESSED DOWNLIGHT	CREE	RLA-LR6X-18L-40K	LED	21 W	120 V		17
С	INTERIOR LIGHTING	2'x2' H.E. TROFFER	CREE	RLA-FLX22-40L-940-CRV-10V10-UNV	LED	33 W	120 V		10
CE	INTERIOR LIGHTING	2'x2' H.E. TROFFER WITH BATTERY	CREE	RLA-FLX22-40L-940-CRV-10V10-UNV-EB	LED	33 W	120 V	WITH EMERGENCY BALLAST	2
J	INTERIOR LIGHTING	8' LED LINEAR FIXTURE	CREE	RLA -LS8-120L-950-R-UL-10V	LED	92 W	120 V		2
A2	EXTERIOR SITE LIGHTING	SINGLE MEDIUM EXTERIOR POLE FIXTURE	CREE	OSQ-ML-B-XX-XX + OSQM-B-16L-57K7-2M-UL-NM-XX	LED	104 W	120 V		3
A3	EXTERIOR SITE LIGHTING	SINGLE MEDIUM EXTERIOR POLE FIXTURE	CREE	OSQ-ML-B-XX-XX + OSQM-B-16L-57K7-3M-UL-NM-XX	LED	104 W	120 V		2
A3B	EXTERIOR SITE LIGHTING	SINGLE MEDIUM EXTERIOR POLE FIXTURE	CREE	OSQ-ML-B-XX-XX + OSQM-B-16L-57K7-3M-UL-NM-XX + OSQ-BLSMF	LED	104 W	120 V		6
A4-2	EXTERIOR SITE LIGHTING	SINGLE MEDIUM EXTERIOR POLE FIXTURE	CREE	OSQ-ML-B-XX-XX + OSQM-B-16L-57K7-4M-UL-NM-XX	LED	104 W	120 V		1
A4B	EXTERIOR SITE LIGHTING	SINGLE MEDIUM EXTERIOR POLE FIXTURE	CREE	OSQ-ML-B-XX-XX + OSQM-B-16L-57K7-4M-UL-NM-XX + OSQ-BLSMF	LED	104 W	120 V		4
INV	EXTERIOR SITE LIGHTING	EMERGENCY BATTERY BACKUP FOR EXT LIGHTS - 90 MIN	DUAL-LITE	LG125T1AO	LED	21 W	120 V		1
L	EXTERIOR SITE LIGHTING	64" 24-VOLT LED TAPE	GETC	FLEXPOD 64" CUSTOM CUT	LED	44 W		B-QBSS1A-09624-HE QUICKBOX SLIM POWER SUPPLY	7 9
WP3	EXTERIOR SITE LIGHTING	EXT. WALL PACK ("EM" - INVERTER BACK-UP)	CREE	XSPW-B-WM-4ME-6L-40K-UL-XX	LED	47 W	120 V		3
WP4	EXTERIOR SITE LIGHTING	EXT. WALL PACK ("EM" - INVERTER BACK-UP)	CREE	XSPW-B-WM-4ME-8L-40K-UL-XX	LED	47 W	120 V		4
EM	EMERGENCY LIGHTING	LED EMERGENCY DUAL HEAD	LIGHTALARMS	RLA-LCA-2LED	LED	12 W	120 V		2
EX	EMERGENCY LIGHTING	LED EXIT SIGN / EMERGENCY LIGHT COMBO	LIGHTALARMS	RLA-UQLXN500X-2LED	LED	12 W	120 V		3
W	EMERGENCY LIGHTING	WET-LISTED EMERGENCY REMOTE DUAL HEAD	THOMAS & BETTS DORVAL, QUEBEC	CAM-SD-XX	LED	10 W	120 V	(2) 1W HEADS GRAY FINISH	1
CAN	CANOPY LIGHTING	CANOPY LIGHT	CREE	CPY250-C-13L-57K7-F-UL-DM-XX	LED	86 W	208 V	CANOPY LIGHT	28
D		4' GASKETED WRAP AROUND	CREE	RLA-WS4-C-40L-LRA-40K-8-UL	LED	30 W			1

H	SYMBOL
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G GF	GROUNE EP GROUNE
GF	PROTEC I GROUNE INTERRU
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ELECTRICAL SYMBOLS LEGEND

	(SYMBOLS APPLY ONLY WHEN USED ON DRAWINGS)
	DESCRIPTION
]	LIGHT FIXTURE (WALL MOUNTED/CEILING MOUNTED)
	LIGHT FIXTURE
	LIGHT FIXTURE, NIGHT LIGHT
	EXIT SIGN, WITHOUT OR WITH INTEGRATED EMERGENCY LIGHTING (WALL MOUNTED/CEILING MOUNTED) EMERGENCY LIGHT
	(WALL MOUNTED/CEILING MOUNTED)
	CEILING MOUNTED LINE VOLTAGE PHOTOCELL SENSOR, LEVITON "PCCSD-W" OR EQUAL.
	CEILING MOUNTED ULTRASONIC OCCUPANCY SENSOR, LEVITON ODC05-MDW OR EQUAL.
	STANDARD 20A, SINGLE PHASE SPST TOGGLE SWITCH
	3-WAY SWITCH
	KEYED SWITCH
	DIMMER SWITCH, SINGLE PHASE SLIDING TYPE SWITCH. LUTRON "NOVA-T" SERIES OR APPROVED EQUAL. PROVIDE SEPARATE NEUTRAL FOR EACH DIMMER CIRCUIT.
	MANUAL MOTOR SWITCH
	SINGLE POLE OCCUPANCY SENSOR SWITCH
	DOUBLE POLE OCCUPANCY SENSOR SWITCH
	STANDARD 20A, 120V 1PH GROUNDING TYPE SIMPLEX RECEPTACLE
	STANDARD 20A, 120V 1PH GROUNDING TYPE DUPLEX RECEPTACLE
	STANDARD 20A, 120V 1PH GROUNDING TYPE QUADRUPLEX RECEPTACLE
	STANDARD 20A, 120V 1PH GROUNDING "GROUND FAULT INTERRUPTER" GFI RECEPTACLE
	STANDARD 20A, 120V 1PH ISOLATED GROUND TYPE DUPLEX RECEPTACLE, ORANGE IN COLOR
	STANDARD 20A, 120V 1PH GROUNDING TYPE DUPLEX RECEPTACLE MOUNTED IN FLUSH FLOOR OUTLET BOX
	STANDARD 20A, 120V 1PH GROUNDING TYPE QUADRUPLEX RECEPTACLE MOUNTED IN FLUSH FLOOR OUTLET BOX
	SPECIAL RECEPTACLE - VERIFY NEMA CONFIGURATION WITH INSTALLED EQUIPMENT MANUFACTURER REQUIREMENTS.
	JUNCTION BOX. SIZED BY THE CONTRACTOR PER ACTUAL NUMBER OF CONDUITS AND / OR CONDUICTORS PASSING THROUGH. (WALL MOUNTED/CEILING MOUNTED)
	CEILING MOUNTED RECEPTACLE, STANDARD 20A, 120V 1PH GROUNDING TYPE DUPLEX RECEPTACLE
	DISCONNECT SWITCH, AMPS, POLES AND FUSE SIZE AS SHOWN (FUSE SIZE CALLED OUT IF REQUIRED)
	FLUSH MOUNTED PANELBOARD, REFERENCE PANEL SCHEDULE FOR RATINGS AND COMPONENTS
	SURFACE MOUNTED PANELBOARD, REFERENCE PANEL SCHEDULE FOR RATINGS AND COMPONENTS
	SMOKE DETECTOR / DUCT SMOKE DETECTOR
1	HORN / STROBE, CANDELA AS INDICATED, COORDINATE WITH FIRE ALARM PLANS
	TELEPHONE OUTLET WITH (2) RJ45 PORTS U.O.N., PROVIDE 3/4"C TO ACCESSIBLE CEILING SPACE OR AS OTHERWISE INDICATED
	DATA OUTLET WITH (2) RJ45 PORTS U.O.N., PROVIDE 3/4"C TO ACCESSIBLE CEILING SPACE OR AS
	OTHERWISE INDICATED COMBINATION TELEPHONE / DATA OUTLET WITH (4) RJ45 PORTS U.O.N., PROVIDE (2) 3/4"C TO ACCESSIBLE CEILING SPACE OR AS OTHERWISE INDICATED
	SECURITY CAMERA BY OTHERS.
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HING CONFIGURATION		UNIT
FINISHED FLOOR	NTS	NOT TO SCALE
FINISHED GRADE	REC	REFRIGERATION
JIT		ELECTRICAL
IT		CONTRACTOR
G FAN	RC	REFRIGERATION
WRAP		CONTRACTOR
RICAL CONTRACTOR	RH	RADIANT HEATER
IST FAN	SC	SECURITY CAMERA
NG TO REMAIN	TR	TAMPER RESISTANT
RIC WATER COOLER	TYP	TYPICAL
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ND FAULT EQUIPMENT	UNO	UNLESS NOTED
ECTION		OTHERWISE
ND FAULT CIRCUIT	WH	WATER HEATER
RUPTER	WP	WEATHER PROOF
FED GROUND	WR	WEATHER RESISTANT

CODE COMPLIANCE INFORMATION

2020 NORTH CAROLINA ELECTRICAL CODE 2018 NORTH CAROLINA BUILDING CODE 2018 NORTH CAROLINA FUEL GAS CODE 2018 NORTH CAROLINA FIRE CODE 2018 NORTH CAROLINA ENERGY CONSERVATION CODE



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PROFESSIONAL



SUITE 5268 1805 N 2ND ST 479-636-5004 JOB NO.: 29894 ROGERS, AR 72756 DESIGNED BY: LHO REVISION

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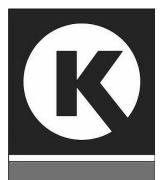
JCA PROJECT SAG QUALITY SAG DRAWN LHO

PROJECT

CIRCLE K STORES, INC.

ANGIER, NC

9706 KENNEBEC CHURCH ROAD, ANGIER, NC PROTOCYCLE# R1.2 12/XX/22



CIRCLE K STORE PROJECT NUMBER: 22130

ELECTRICAL COVER SHEET AND LEGEND

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SECTION 16010 - BASIC ELECTRICAL REQUIREMENTS

- A. THE WORK OF EACH OF THE ELECTRICAL SECTIONS INCLUDES FURNISHING AND INSTALLING THE MATERIAL, EQUIPMENT, AND SYSTEMS COMPLETE AS SPECIFIED AND/OR INDICATED ON THE DRAWINGS. THE ELECTRICAL INSTALLATIONS. WHEN FINISHED. SHALL BE COMPLETE AND COORDINATED. READY FOR SATISFACTORY SERVICE.
- B. THE WORK UNDER THIS CONTRACT SHALL BE DONE IN STRICT ACCORDANCE WITH ALL APPLICABLE MUNICIPAL, STATE AND OTHER LOCAL CODES, THE 2020 EDITION OF THE NATIONAL ELECTRICAL CODE AND THE 2010 ADA STANDARDS.
- C. THE CONTRACTOR SHALL MAKE APPLICATION AND PAY FOR ALL PERMITS, LICENSES AND INSPECTIONS AS REQUIRED UNDER THE ABOVE CODES.
- D. THE GENERAL ARRANGEMENT OF CONDUIT, WIRING AND EQUIPMENT SHALL BE AS IDENTIFIED ON THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL CAREFULLY INVESTIGATE THE SITE, STRUCTURAL, AND FINISH CONDITIONS AFFECTING HIS WORK AND SHALL ARRANGE SUCH WORK ACCORDINGLY, PROVIDING SUCH FITTINGS AND ACCESSORIES AS MAY BE REQUIRED TO MEET SUCH CONDITIONS.
- THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND SERVICES NECESSARY FOR AND REASONABLY INCIDENTAL TO THE COMPLETE INSTALLATION OF THE ELECTRICAL WORK AND RELATED SYSTEMS AS INDICATED ON THE DRAWINGS OR AS NECESSARY TO PROVIDE A COMPLETE SYSTEM
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY WIRING, LIGHTING AND CONSTRUCTION POWER FOR ALL TRADES AS REQUIRED TO COMPLETE THE PROJECT.
- G. ALL MATERIALS AND EQUIPMENT SHALL BE INSTALLED AND COMPLETED IN A FIRST CLASS WORKMANLIKE MANNER. ALL MATERIALS SHALL BE NEW AND THE BEST OF THEIR RESPECTIVE KINDS. ALL EQUIPMENT AND SYSTEMS SHALL BE APPROVED BY UL OR SIMILAR NATIONALLY ACCEPTED TESTING AGENCY SUCH AS ETL TESTING LABORATORIES.
- H. THE CONTRACTOR SHALL VISIT THE SITE AND OBSERVE THE CONDITIONS UNDER WHICH THE WORK SHALL BE COMPLETED. NO ALLOWANCE WILL BE MADE SUBSEQUENTLY IN THIS CONTRACT FOR ANY ERROR OR NEGLIGENCE IN THE CONTRACTOR'S PART.
- THE CONTRACTOR SHALL SUBMIT DETAILED DIMENSIONED SHOP DRAWINGS, TOGETHER WITH WIRING DIAGRAMS, SPECIFICATIONS, OPERATING DATA, AND/OR CATALOG CUTS FOR ALL EQUIPMENT.
- A THOROUGH TEST SHALL BE MADE PRIOR TO ENERGIZING THE SYSTEM TO DEMONSTRATE THAT THE SYSTEM IS ENTIRELY FREE FROM GROUND FAULTS, SHORT CIRCUITS, AND OPEN CIRCUITS; THAT THE RESISTANCE TO GROUND OF ALL NON-GROUNDED CIRCUITS, BEFORE AND AFTER CONNECTION OF EQUIPMENT MEETS THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE AND IEEE STANDARDS/RECOMMENDATIONS.
- K. IDENTIFY ALL MOTOR STARTERS, SWITCHES, CONTROLS, PANELBOARDS, SWITCHBOARDS, TERMINAL BOARDS, CONTROL CENTERS AND OTHER EQUIPMENT. IDENTIFICATION PLATES SHALL BE LAMINATED PLASTIC, BLACK AND WHITE ENGRAVED LETTERS. LETTERING FOR CONTROL CENTERS, CONTROL PANELS, METERING AND INSTRUMENT PANELS SHALL BE 3/8"
- THE MATERIAL AND WORKMANSHIP OF ALL PARTS OF THE ELECTRICAL INSTALLATION SPECIFIED HEREIN SHALL BE L. GUARANTEED UNCONDITIONALLY FOR A PERIOD OF ONE (1) YEAR FROM DATE OF FINAL CERTIFICATE OF OCCUPANCY OR GRAND OPENING, WHICH EVER COMES FIRST.
- M. UPON COMPLETION OF THE ELECTRICAL INSTALLATION, THE CONTRACTOR SHALL DELIVER TO THE OWNER ONE SET OF SCANNED DIGITAL PRINTS OF ELECTRICAL CONTRACT DRAWINGS WHICH SHALL BE LEGIBLY MARKED IN RED TO SHOW ALL ADDITIONS, CHANGES AND DEPARTURES OF THE INSTALLATION AS COMPARED WITH THE ORIGINAL DESIGN. THEY SHALL BE SUITABLE FOR USE IN PREPARATION OF RECORD DRAWINGS.
- N. THE CONTRACTOR SHALL PREPARE A RECORD AND INFORMATION MANUAL. THE MANUAL SHALL BE SCANNED INTO A DIGITAL FORMAT AND FORWARDED TO CIRCLE K CONSTRUCTION. PROVIDE THE FOLLOWING DATA IN THE RECORD AND INFORMATION MANUAL:
 - CUT SHEETS OF ALL EQUIPMENT WITH TECHNICAL SPECIFICATIONS.
 - OPERATION AND MAINTENANCE PROCEDURES. SERVICING INSTRUCTIONS.
 - COPIES OF PANELBOARD DIRECTORIES.
 - COPIES OF WARRANTIES. LIST OF LAMPS SHOWING QUANTITY, TYPE, WATTAGE, MANUFACTURER, CATALOG NUMBER, ETC., FOR EACH FIXTURE TYPE.
 - COPIES OF TEST REPORTS.
- EXACT LOCATIONS OF OUTLETS SHALL BE COORDINATED WITH DOOR SWINGS AND VARIOUS PROTRUSIONS. MOUNTING 0 HEIGHTS OF THE VARIOUS ELECTRICAL DEVICES SHALL BE AS FOLLOWS

SWITCHES	46" AFF TO CENTER OF BOX
RECEPTACLES	20" AFF TO CENTER OF BOX
TELEPHONE OUTLETS	20" AFF TO CENTER OF BOX
EXIT LIGHTS	CENTERED BETWEEN CEILING AND TOP OF DOOR (UP TO 1'-0" ABOVE DOOR), SURFACE OR CEILING MOUNTED AS SHOWN
DISCONNECTING SWITCHES	52" AFF TO CENTER OF SWITCH

- P. PROVIDE A DISCONNECT SWITCH FOR EACH MOTOR AS SHOWN ON THE DRAWINGS SIZED AS REQUIRED TO MEET THE NEC AND PROVIDE ALL WIRING CONNECTIONS FROM SOURCE. PROVIDE REQUIRED VOLTAGE.
- Q. SEAL ALL CONDUIT PENETRATIONS THRU RATED WALLS AND FLOORS TO MAINTAIN FIRE INTEGRITY. REFER TO
- ARCHITECTURAL DRAWING FOR FIRE WALL LOCATIONS. R. ELECTRICAL CONTRACTOR SHALL VERIFY ALL VOLTAGES OF MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
- SECTION 16050 BASIC ELECTRICAL MATERIALS AND METHODS
- INSTALL ALL WIRING CONDUIT EXCEPT AS OTHERWISE INDICATED. MINIMUM CONDUIT SIZE SHALL BE 3/4". ALL CONDUIT Α. EMBEDDED IN CONCRETE SHALL BE 3/4" MINIMUM. INSTALL ALL CONDUIT CONCEALED UNLESS ON UNFINISHED WALLS, ON UNFURRED CEILINGS OR MECHANICAL EQUIPMENT SPACES. PROVIDE CONDUIT AS FOLLOWS:
 - RIGID STEEL CONDUIT FOR WORK EXPOSED TO WEATHER OR EMBEDDED IN CONCRETE OR MASONRY. GALVANIZED ELECTRICAL METALLIC TUBING (EMT) FOR INTERIOR EXPOSED WORK, CONCEALED WORK
 - ABOVE SUSPENDED CEILINGS, AND WITHIN INTERIOR PARTITIONS OR NON-MASONRY WALLS. FLEXIBLE METAL CONDUIT IN SHORT LENGTHS (6' MAXIMUM) FOR THE CONNECTION OF RECESSED
 - LIGHTING FIXTURES AND MOTORS. LIQUID TIGHT FLEXIBLE METAL CONDUIT WHEREVER MOISTURE MAY BE PRESENT AND MOTORS IN MECHANICAL EQUIPMENT SPACES.
 - POLYVINYLCHLORIDE (PVC) SCHEDULE 40 AND 80 CONDUIT WITH GROUND CONDUCTOR FOR UNDERGROUND OUTSIDE OF BUILDING (SITE) INSTALLATION AS PERMITTED BY 2008 NEC ARTICLE 352
- B. INSTALL CONDUITS PARALLEL AND PERPENDICULAR TO WALLS AND INTERIOR SURFACES. CLEAN AND PLUG AND PROVIDE A PULL LINE IN EACH CONDUIT LEFT EMPTY. USE MANUFACTURED ELBOWS AND SCREW JOINTED CONDUIT FITTINGS. USE CAPPED BUSHINGS OR "PUSH PENNY" PLUGS. ALL FITTINGS SHALL BE STEEL OR MALLEABLE IRON. ALL EMT FITTINGS SHALL BE COMPRESSION TYPE.
- C. ALL OUTLET, SWITCH AND JUNCTION BOXES, SHALL BE STAINLESS STEEL BY STEEL CITY, RACO, APPLETON, VALEN, OR EQUIVALENT. OUTLET BOXES IN CONCRETE CONSTRUCTION SHALL BE OCTAGONAL. NO "THRU-WALL" BOXES SHALL BE USED IN PARTITIONS. ALL BOXES SHALL BE FURNISHED WITH APPROPRIATE COVERS.
- JUNCTION AND PULL BOXES SHALL BE FURNISHED AND INSTALLED AS INDICATED OR WHERE REQUIRED TO FACILITATE D. PULLING OF WIRES OR CABLES. BOXES FOR EXTERIOR WORK SHALL BE CAST ALUMINUM OR GALVANIZED CAST IRON TYPE WITH THREADED HUBS, UNLESS OTHERWISE DIRECTED. GASKETED COVER PLATES SHALL BE FURNISHED FOR OUTDOOR INSTALLATIONS.
- BUILDING WIRE, UNLESS OTHERWISE INDICATED, SHALL BE COPPER, 600 VOLT, TYPE THWN/THHN INSULATION, #12 AWG MINIMUM, FOR INTERIOR AND EXTERIOR USE. FOR BRANCH CIRCUITS TYPE MC (METAL CLAD) CABLE MAY BE USED WHERE PERMITTED BY THE NEC AND LOCAL CODES. NO ROMEX OR AC (BX) CABLE WILL BE ALLOWED ON THE PROJECT.
- MINIMUM WIRE SIZE SHALL BE NUMBER TWELVE (12) AWG. NO SPLICES SHALL BE MADE EXCEPT WITHIN OUTLET OR F JUNCTION BOXES. WIRES NUMBER EIGHT (8) AWG AND LARGER SHALL BE STRANDED. WIRES AND CABLES SHALL BE MANUFACTURED BY PIRELLI, ROYAL, TRIANGLE OR EQUIVALENT.

G.	THE COLOR CODING SYSTEM LISTED BELOW SHALL BE USED THROUGHOUT THE BUILDING:						
	<u>SYSTEM</u>	<u>PHASE A</u>	PHASE B	PHASE C	<u>NEUTRAL</u>	<u>GROUND</u>	ISOLATED GROUND
	120/208V	BLACK	RED	BLUE	WHITE	GREEN	GREEN/YELLOW
	277/480V	BROWN	ORANGE	YELLOW	GRAY	GREEN	GREEN/YELLOW

- H. THE WIRE SIZE INDICATED IN THE HOMERUN SHALL BE USED THROUGH THE CIRCUIT. PROVIDE DISCONNECT SWITCHES WHERE INDICATED AND AS REQUIRED. SWITCHES SHALL BE OF SIZE, NUMBER OF POLES AND FUSED OR NONFUSED, AS REQUIRED FOR JOB CONDITIONS AND THE NATIONAL ELECTRICAL CODE. ALL SAFETY SWITCHES SHALL BE NEMA I ENCLOSURE "HD" WITH INTERLOCKING COVER AND HANDLE, MANUFACTURED BY SQUARE "D" OR APPROVED EQUAL. PROVIDE NEMA 3R ENCLOSURES WHERE REQUIRED.
- PROVIDE STARTERS AND CONTROL WIRING AS INDICATED ON THE DRAWINGS, OR SPECIFIED HEREIN. ALL TEMPERATURE CONTROL WIRING AND COMPONENTS SHALL BE UNDER DIVISION 15.
- PROVIDE THERMAL MANUAL MOTOR STARTING SWITCHES FOR FRACTIONAL HORSEPOWER, SINGLE PHASE MOTORS. THE STARTERS SHALL BE SQUARE D COMPANY, CLASS 2510, ALLEN BRADLEY BULLETIN 600, OR APPROVED EQUAL FOR SINGLE SPEED MOTORS. ENCLOSURES SHALL BE NEMA I FOR INTERIOR USE AND NEMA 3R FOR EXTERIOR USE.
- THREE PHASE MOTOR STARTERS SHALL BE 3 POLE, FULL-VOLTAGE, MAGNETIC TYPE. ENCLOSURES SHALL BE NEMA I FOR INTERIOR USE AND NEMA 3R FOR EXTERIOR USE. PROVIDE HOA SWITCH WHEN AUTOMATICALLY CONTROLLED. PILOT INDICATING LIGHT, CONTROL TRANSFORMER, AND NO/NC AUXILIARY CONTACTS. STARTERS SHALL BE SQUARE D COMPANY, CLASS 8536 AND CLASS 8538 COMBINATION TYPE OR APPROVED EQUAL.

- HAVING CORROSION-RESISTANT FINISH. Ο.
- - THE NEC TABLE 250.112.
 - SURFACES AS REQUIRED.
- SECTION 16400 SERVICE AND DISTRIBUTION 3.
- в
- C.
- D. BUS BARS.

- SECTION 16500 LIGHTING 4.
- Β. SHALL BE LEXAN TYPE MR-4000, OR EQUAL.
- D. AVAILABLE.
- RECESSED FIXTURES.
- 5. SECTION 16700 - COMMUNICATION SYSTEMS

M. WIRING DEVICES SHALL BE ARROW HART, GENERAL ELECTRIC, P & S LEVITON OR HUBBELL: 1) WALL SWITCHES: ARROW HART 1991. THREE AND FOUR-WAY SWITCHES SHALL BE OF THE SAME

MANUFACTURER AND GRADE. 2) RECEPTACLES: ARROW HART 5362 FOR 20 AMPERES. GFCI SHALL BE #GFCS20 RATED 20 AMPERE, 120 VOLT. PROVIDE TAMPER RESISTANT AND MOISTURE RESISTANT TYPE WHERE REQUIRED BY NEC. DIMMERS: 600/1000/1500/2000 WATTS AS REQUIRED BY JOB CONDITIONS. LUTRON 'NOVA' SERIES OR EQUAL. 4) DEVICE PLATES: ARROW HART SWITCH PLATES SI-S6 SERIES. ARROW HART RECEPTACLE PLATES S8. ARROW HART TELEPHONE BLANK PLATES S14.

N. MOUNT WEATHERPROOF DEVICES IN CAST METAL BOXES WITH GASKETED, SPRING-HINGED LID-TYPE LOCKING COVERS

THE ENTIRE ELECTRICAL SYSTEM SHALL BE SOLIDLY GROUNDED INCLUDING MAIN SERVICE EQUIPMENT, DISCONNECT SWITCHES, WIRING TROUGHS AND PULL BOXES, CONDUIT SYSTEM, OUTLET BOXES, MOTORS, ELECTRIC HEATING EQUIPMENT, LIGHTING FIXTURES, TRANSFORMERS, EMERGENCY SYSTEMS, UPS SYSTEMS, AND FIRE ALARM SYSTEMS. PROVIDE EQUIPMENT GROUNDING CONDUCTORS IN ALL BRANCH CIRCUITS AND FEEDERS SIZED IN ACCORDANCE WITH

Q. ALL BRANCH CIRCUITS SHALL BE RUN CONCEALED IN EXISTING AND NEW WALLS. CUT AND PATCH EXISTING WALLS AND

R. ALL D.C. WIRING SHALL BE #10 AWG MINIMUM.

GROUND, PHASE AND NEUTRAL CONDUCTORS SHALL BE PIG-TAILED IN OUTLET BOXES OR MULTI-OUTLET ASSEMBLY FOR RECEPTACLES SO THAT GROUND AND ELECTRICAL SERVICE WILL NOT BE DISRUPTED TO OTHER RECEPTACLES ON THE SAME MULTI-WIRE CIRCUIT IF RECEPTACLE IS REMOVED.

A. COORDINATE ALL SERVICE ENTRANCE WORK WITH THE ELECTRIC UTILITY.

DISTRIBUTE POWER AT 120/208V. 3 PHASE, 4 WIRE, LED LIGHTING, AIR CONDITIONING, ELECTRIC HEATING, MOTOR CIRCUITS, AND 120/208V FOR RECEPTACLES, INCANDESCENT LIGHTS AND SMALL MOTORS.

PANELBOARDS SHALL BE 120/208 VOLTS, THREE PHASE EMPLOYING BREAKERS MINIMUM 10,000 SYMMETRICAL A.I.C. AT 120 VOLTS. FURNISH PANELBOARDS AS INDICATED ON DRAWINGS E6.0, E7.0 AND E7.1.

PANELBOARDS SHALL BE FACTORY ASSEMBLED WITH BOLT-ON TYPE CIRCUIT BREAKERS. BUSS SHALL BE ALUMINUM. PROVIDE 50% GROUND BUS BAR. PANELS CONNECTED TO K-RATED TRANSFORMERS SHALL HAVE 200% RATED NEUTRAL

PROVIDE THREE (3) 3/4 INCH SPARE CONDUITS FROM EACH RECESSED PANEL TO THE CEILING SPACE.

F. FUSES FOR SERVICE ENTRANCE EQUIPMENT SHALL BE U.L. LISTED CLASS L, J, OR RKI. FUSES FOR FEEDER CIRCUITS AND PANELBOARDS SHALL BE U.L. CLASS RKI FAST-ACTING TYPE. FUSES FOR MOTOR OVERCURRENT, MOTOR CONTROLLER, AND TRANSFORMER PROTECTION SHALL BE DUAL-ELEMENT, U.L. CLASS RKI TIME-DELAY TYPE

G. PROVIDE ENERGY EFFICIENT, NEMA TP-1, SELF-COOLED, DRY TYPE TRANSFORMERS OF KVA, PHASE, "K" AND VOLTAGE RATINGS AS INDICATED. TRANSFORMERS 15 KVA AND LESS SHALL HAVE A CLASS F INSULATION, 115 DEGREES C RISE. TRANSFORMERS ABOVE 15 KVA SHALL HAVE CLASS H INSULATION, 115 DEGREE C RISE, PROVIDE FOUR 2-1/2 TAPS BELOW TWO 2-1/2 TAPS ABOVE RATED PRIMARY VOLTAGE. TRANSFORMERS OF 150 KVA AND LESS SHALL BE RATED 45 DB. LARGER TRANSFORMERS SHALL BE RATED 55 DB. NEUTRALS AND NEUTRAL CONNECTIONS OF ALL "K" RATED DRY TYPE TRANSFORMERS SHALL BE 200% OF THE PHASE CONDUCTOR SIZE. TRANSFORMER SHALL BE HEVI-DUTY ELECTRIC COMPANY, GENERAL ELECTRIC, SORGEL, ACME OR HOWARD INDUSTRIES.

PROVIDE A COMPLETE LIGHTING FIXTURE AT EACH LOCATION INDICATED ON THE DRAWINGS. FIXTURES SHALL BE SPECIFIED ON THE LIGHTING FIXTURE SCHEDULE ON THE DRAWINGS.

ALL PLASTIC DIFFUSERS SHALL BE 100 PERCENT VIRGIN ACRYLIC (NOMINAL .125 INCH THICK) AND ALL LEXAN DIFFUSERS

C. 8-FOOT TANDEM UNITS MAY BE USED IN LIEU OF 4 FOOT UNITS IN CONTINUOUS ROWS.

THE CONTRACTOR SHALL CONSULT THE CEILING CONTRACTOR AND ARCHITECT'S DRAWINGS FOR APPROVED REFLECTED CEILING PLANS BEFORE ORDERING FIXTURES TO INSURE THAT ALL ARE COMPATIBLE WITH THE CEILING SYSTEM AND PROPERLY LOCATED. VERIFY THAT ADEQUATE CLEARANCE FOR INSTALLATION, MAINTENANCE, AND HEAT DISSIPATION IS

PROVIDE A MINIMUM OF TWO (2) GALVANIZED STEEL #12 GAUGE HANGER WIRES (ALTERNATE CORNERS) ON ALL

CONTRACTOR SHALL PROVIDE ADDITIONAL EXIT LIGHTS AND EMERGENCY BATTERY PACK WITH DUAL HEADS AS NEEDED TO MEET FIRE MARSHAL'S WALK-THROUGH AND ACCEPTANCE.

G. CONNECT EXIT LIGHTS, EMERGENCY BATTERY UNITS AND NIGHT LIGHTS (NL) TO UNSWITCHED PORTION OF LIGHTING CIRCUIT SERVING RESPECTIVE AREA.

TELEPHONE SERVICE SHALL BE INSTALLED BY THE TELEPHONE COMPANY

PROVIDE WALL OUTLETS IN 4" SQUARE 2-1/8" DEEP BOX WITH RAISED SINGLE GANG COVERS EQUIPPED WITH BLANK STAINLESS STEEL DEVICE PLATES. EXTEND 3/4" EMPTY CONDUIT FROM EACH OUTLET TO THE CEILING SPACE AND TERMINATE WITH INSULATED BUSHINGS. PROVIDE NYLON PULL WIRE IN ALL CONDUITS LEFT EMPTY.



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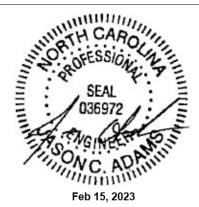


SUITE 5268 479-636-5004 1805 N 2ND ST JOB NO.: 29894 ROGERS, AR 72756 DESIGNED BY: LHO REVISION

DATE

02/15/23

OTP



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JCA PROJECT SAG QUALITY SAG DRAWN LHO

PROJECT

CIRCLE K STORES, INC.

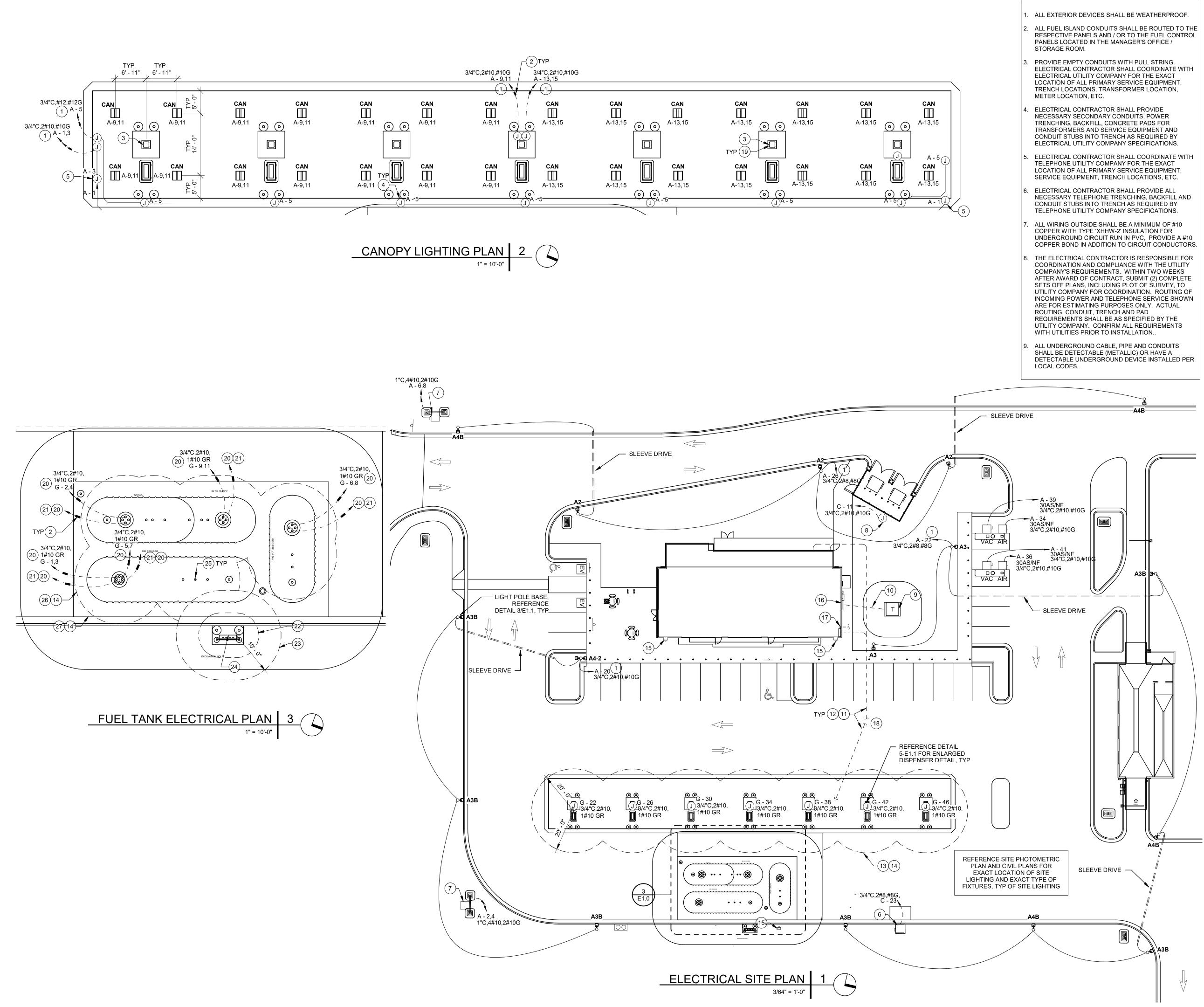
ANGIER, NC

9706 KENNEBEC CHURCH ROAD. ANGIER, NC PROTOCYCLE# R1.2 12/XX/22



CIRCLE K STORE PROJECT NUMBER: 22130

ELECTRICAL SPECIFICATIONS



GENERAL NOTES

KEYNOTES

- SITE LIGHTING CIRCUITS SHALL BE ROUTED VIA 1 20A ELECTRICALLY HELD LIGHTING CONTACTORS CONTROLLED BY THE 'EPO' SWITCHES AND PHOTOCELL. 'EPO' SWITCHES LOCATED AT THE FUEL CANOPY AND STORE ON THE SITE. REFERENCE DETAIL 2/E6.0.
- PROVIDE SEAL-OFF FITTINGS AT EACH END OF 2 CONDUIT IN CONJUNCTION WITH / G.V.R. DISPENSER MANUAL. REFERENCE DETAIL 4/E1.1
- PROVIDE AND INSTALL WP JUNCTION BOXES IN 3 CANOPY FOR WHITE SPEAKERS. MAKE CONNECTIONS TO CONDUITS PROVIDED IN CANOPY COLUMN.

4

- CANOPY EYEBROW LED STRIP LIGHTS. ONE DOUBLE KWIK BOX POWER CONNECTION PER EACH GROUP OF FOUR SECTIONS.
- WP JUNCTION BOX FOR COMPLETE CONNECTION OF CANOPY SIGN. VERIFY EXACT LOCATION IN **FIELD**
- PROVIDE WEATHERPROOF DISCONNECT SWITCH 6 FOR WATER / AIR FILL STATION. VERIFY EXACT LOCATION IN FIELD, AND VERIFY REQUIREMENTS PRIOR TO ROUGH-IN
- PROVIDE WEATHERPROOF DISCONNECT SWITCH. COORDINATE EXACT CONNECTION AND WIRING REQUIREMENTS WITH SIGN CONTRACTOR AND FINAL SECTION PRIOR TO INSTALLATION. PROVIDE (2) 1" CONDUITS, ONE FOR POWER AND ONE FOR PHONE AND COMMUNICATION.
- HEAT TRACE TO BE PROVIDED FOR BACKFLOW 8 PREVENTER IN COLD REGION.
- PROVIDE HOUSEKEEPING PAD FOR POWER CO. 9 PAD MOUNTED TRANSFORMER PER UTILITY COMPANY REQUIREMENTS.
- 10 REFER TO ONE-LINE DIAGRAM FOR CONDUCTOR AND CONDUIT SIZES. VERIFY WITH POWER COMPANY
- 11 FUEL DISPENSER CONDUITS FOR POWER, INTERCOM, CRIND DATA AND SENSORS. REFERENCE DETAIL 5/E1.1 AND FUEL SYSTEM VENDOR DRAWINGS.
- (1) 3/4" CONDUIT AND (3) 1" CONDUITS FROM 12 ELECTRICAL PANELS TO CLOSEST CANOPY COLUMN. ROUTE CONDUITS UP TO CANOPY DECK FOR SPEAKER/SECURITY CAMERA CONNECTIONS. PROVIDE PULL STRINGS IN ALL CONDUITS. REFERENCE ELECTRICAL VENDOR DRAWINGS FOR CONDUIT ENTRANCE LOCATIONS IN PANELS.
- CLASS 1 DIVISION 2 HAZARDOUS AREA: 13 OUTDOOR DISPENSING DEVICE: UP TO 18" OF DISPENSER ENCLOSURE, EXTENDING 20 FT. HORIZONTALLY IN ALL DIRECTIONS FROM DISPENSER ENCLOSURE. PER NEC TABLE 514.3(8)(1).
- 14 ALL WIRING IN THIS AREA INCLUDING BELOW GRADE SHALL BE INSTALLED IN RIGID CONDUIT PER NEC ARTICLE 514.8. HOWEVER, PER NEC 514.8 EXCEPTION 2, NONMETALLIC RIGID CONDUIT (PVC) HAVING A MINIMUM OF 24" OF GROUND COVER IS ALLOWED. IN ADDITION, THREADED RIGID METAL CONDUIT OR THREADED STEEL INTERMEDIATE METAL CONDUIT SHALL BE USED FOR THE LAST 2 FEET OF THE UNDERGROUND RUN TO EMERGENCE OR TO THE POINT OF CONNECTION TO THE ABOVE GROUND RACEWAY, AND AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INCLUDED. PROVIDE ALL EXPLOSION PROOF FITTINGS AND SEALS NECESSARY TO COMPLETE CONDUIT SYSTEMS. NO SUBSTITUTIONS SHALL BE MADE UNLESS APPROVED BY THE AUTHORITY HAVING JURISDICTION. PROVIDE EXPLOSION PROOF JUNCTION BOXES (CROUSE HINDS) MODEL GUP215 WITH 0302 'O' RING OR OWNER APPROVED EQUAL.
- "EMERGENCY POWER OFF" SWITCH PER NEC 15 2011. NEC ARTICLE 514.11. PROVIDE SIGNAGE PER IFC SECTION 2204, 2205 (VERIFY EXACT LOCATION WITH CIRCLE 'K' CONSTRUCTION MANAGER). ROUTE (1) 3/4" EMPTY CONDUIT WITH PULL STRING FROM EPO SWITCH TO SWITCHGEAR PANEL DP FUEL CONTROLS SECTION. REFERENCE ELECTRICAL VENDOR DRAWINGS FOR EXACT PANEL SECTION CONDUIT STUB UP LOCATION.
- SERVICE ENTRANCE DISCONNECT PER UTILITY 16 REQUIREMENTS.
- (2) 4" EMPTY CONDUITS FOR TELEPHONE 17 SÉRVICE. VERIFY EXACT QUANTITY AND SIZE WITH SERVING TELEPHONE COMPANY.
- STORE ELECTRICIAN SHALL ROUGH IN CONDUIT 18 AT ELECTRICAL ROOM AND RUN TO PETROLEUM ELECTRICIAN'S POINT OF INTERCEPTION 30 FEET FROM FRONT OF STORE. PETROLEUM ELECTRICIAN SHALL INTERCEPT CONDUIT AND COMPLETE RUNS TO DISPENSERS, CANOPY AND FUEL TANKS. PETROLEUM ELECTRICIAN SHALL FURNISH AND INSTALL ALL WIRING. REFERENCE FUEL SYSTEM VENDOR DRAWINGS FOR ALL REQUIRED CONDUIT, WIRE AND CIRCUITRY.
- CANOPY COLUMN GROUNDING: REFERENCE 19 DETAILS 1 & 2/E1.1.
- 3/4" CONDUIT FOR POWER/STP CONTROL. 20 REFERENCE DETAIL 1/E1.0 FOR POWER CIRCUIT DESIGNATION, CONDUIT AND WIRE SIZE. PROVIDE 4#12 THWN2 FOR STP AUTHORIZATION. VERIFY STP AUTHORIZATION CONDUCTOR QUANTITY, SIZE AND TYPE PER DISPENSER WITH FUEL VENDOR DRAWINGS.
- 3/4" CONDUIT FOR TANK MOTION SENSORS. 21 INSTALL CONDUIT TO SUMP AND INTERSTITIAL SENSORS AT TANKS. REFERENCE FUEL SYSTEM VENDOR DRAWINGS FOR CONDUCTORS TO BE INSTALLED TO SENSORS.
- CLASS 1 DIVISION 1 HAZARDOUS AREA: 22 UNDERGROUND TANK VENT: WITHIN 5 FT. OF OPEN END OF VENT, EXTENDING IN ALL DIRECTIONS. PER NEC TABLE 514.3(B)(1).
- 23 CLASS 1 DIVISION 2 HAZARDOUS AREA: UNDERGROUND TANK VENT: BETWEEN 5 FT. AND 10 FT. OF OPEN END OF VENT, EXTENDING IN ALL DIRECTIONS. PER NEC TABLE 514.3(B)(1). VENT RISERS FROM TANKS.
- 24 TANK FILL STATION. 25
- 26 CLASS 1 DIVISION 2 HAZARDOUS AREA: UNDERGROUND TANK FILL OPENING: UP TO 18" ABOVE GRADE LEVEL, EXTENDING 5 FT. HORIZONTALLY IN ALL DIRECTIONS FROM ANY LOOSE-FILL CONNECTION. PER NEC TABLE 514.3(B)(1).
- 27 CLASS 1 DIVISION 1 HAZARDOUS AREA: UNDERGROUND TANK: INSIDE TANK - ENTIRE INSIDE VOLUME. FILL OPENING - ENTIRE SPACE WITHIN ANY PIT OR BOX BELOW GRADE LEVEL. PER NEC TABLE 514.3(B)(1).



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DATE



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PROJECT SAG QUALITY SAG DRAWN LHO

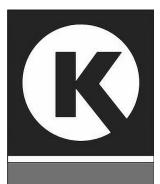
PROJECT

CIRCLE K STORES, INC.

ANGIER, NC

9706 KENNEBEC CHURCH ROAD, ANGIER, NC

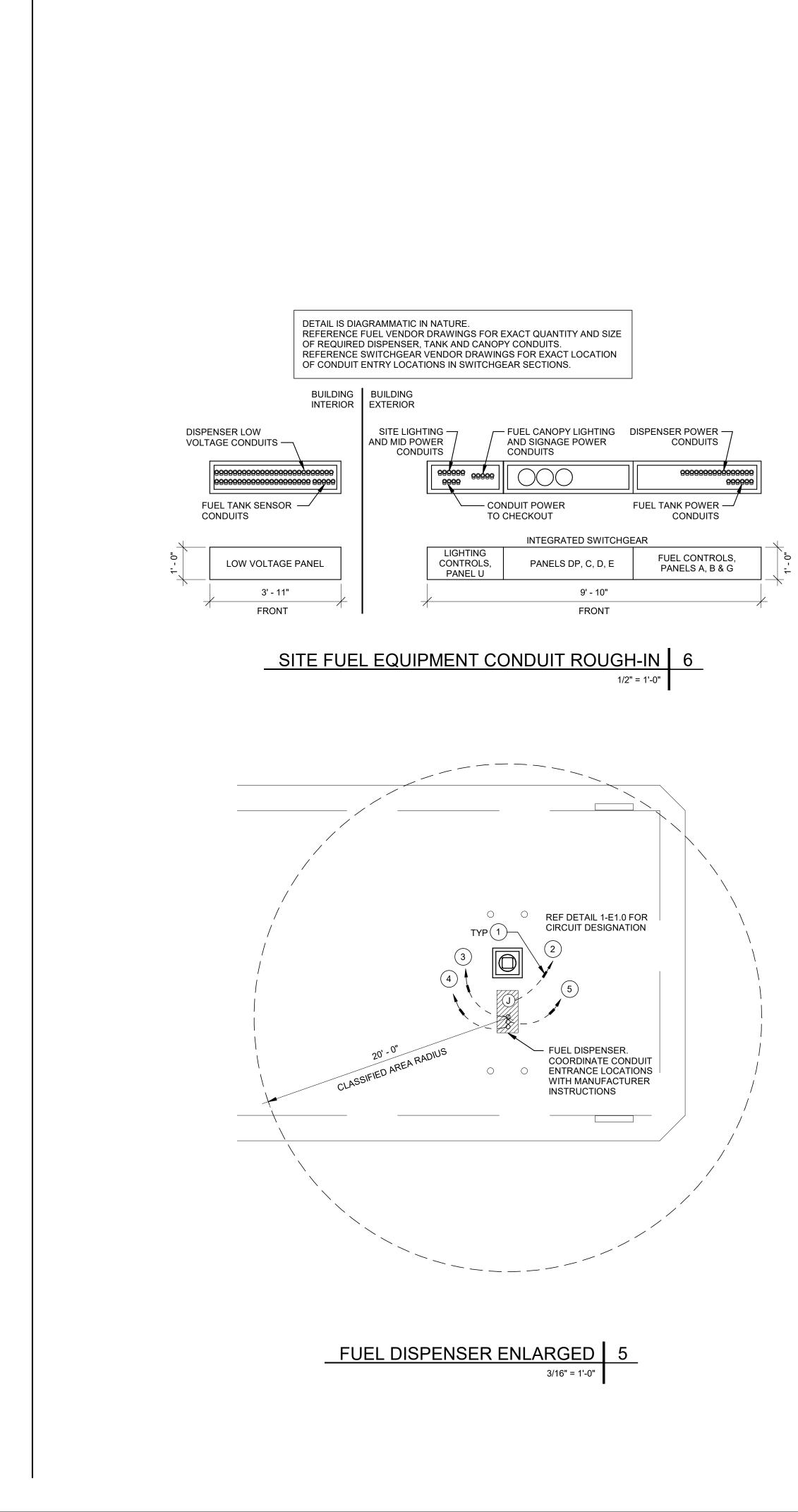
PROTOCYCLE# R1.2 12/XX/22

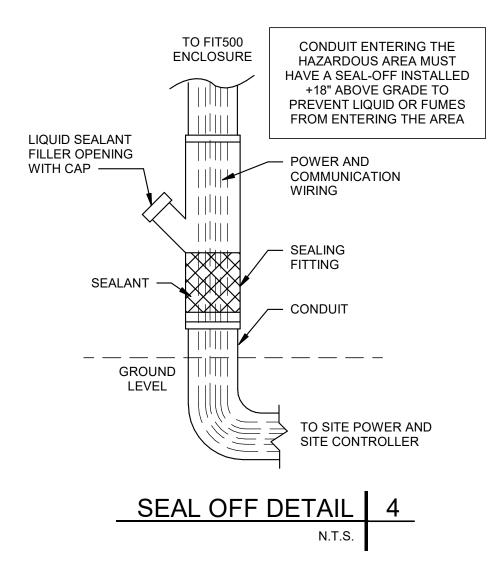


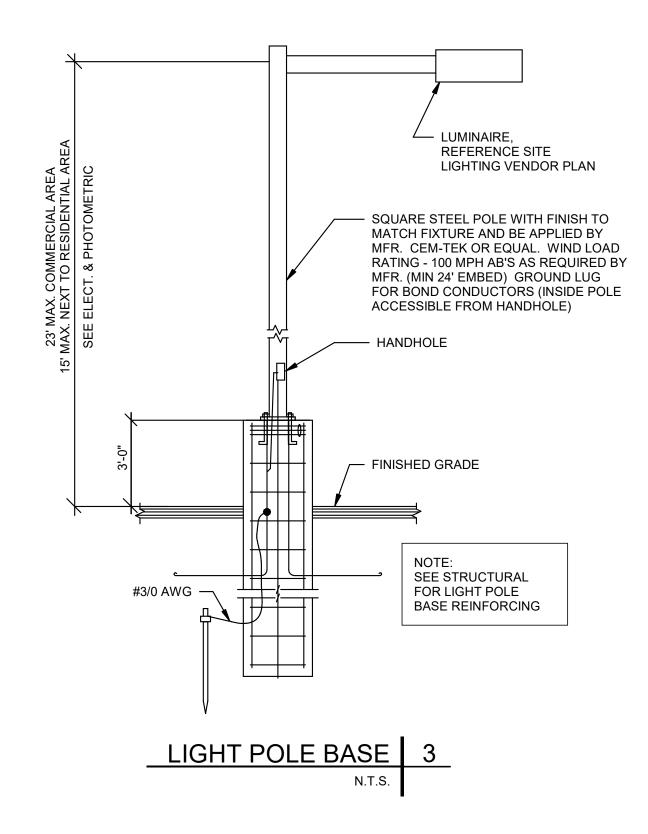
CIRCLE K STORE PROJECT NUMBER: 22130



E1.0

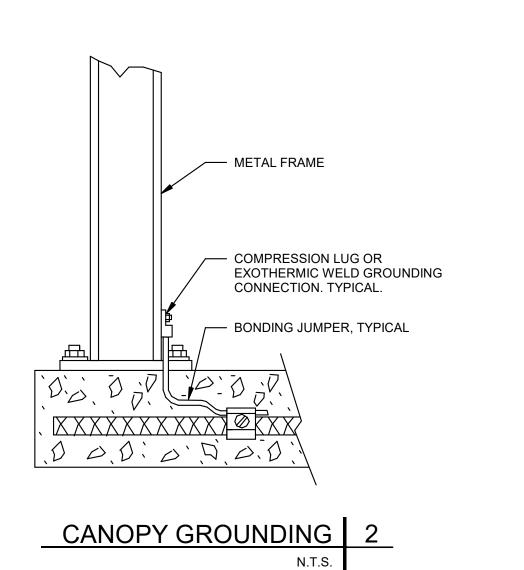


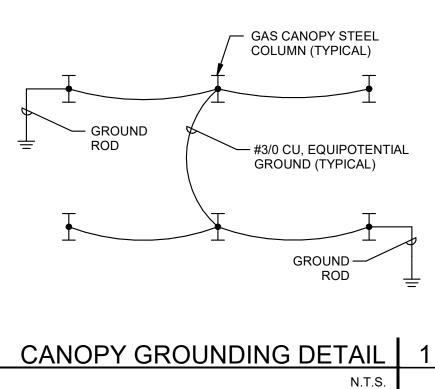




KEYNOTES

- PROVIDE SEAL-OFF FITTINGS AT EACH END OF 1 CONDUIT IN CONJUNCTION WITH / G.V.R. DISPENSER MANUAL. REFERENCE DETAIL 4/E1.1.
- 3/4" CONDUIT FOR POWER/STP CONTROL. 2 **REFERENCE DETAIL 1/E1.0 FOR POWER CIRCUIT** DESIGNATION, CONDUIT AND WIRE SIZE. PROVIDE 4#12 THWN2 FOR STP AUTHORIZATION. VERIFY STP AUTHORIZATION CONDUCTOR QUANTITY, SIZE AND TYPE PER DISPENSER WITH FUEL VENDOR DRAWINGS.
- 3/4" CONDUIT FOR DISPENSER MONITORING 3 SENSOR IN DISPENSER SUMP. REFERENCE FUEL SYSTEM VENDOR DRAWINGS FOR QUANTITY AND TYPE OF CONDUCTORS TO BE INSTALLED.
- 3/4" CONDUIT TO SWITCHGEAR LOW VOLTAGE 4 SECTION FOR DISPENSER INTERCOM. REFERENCE FUEL SYSTEM VENDOR DRAWINGS FOR QUANTITY AND TYPE OF CONDUCTORS TO BE INSTALLED PER DISPENSER.
- 3/4" CONDUIT FOR CRIND DATA. REFERENCE 5 FUEL SYSTEM VENDOR DRAWINGS FOR QUANTITY AND TYPE OF CONDUCTORS TO BE INSTALLED PER DISPENSER.



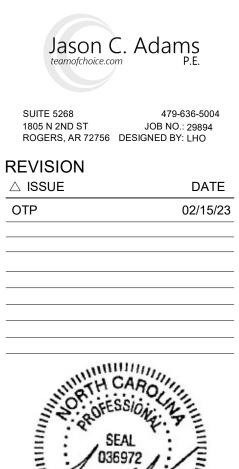


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JCA PROJECT SAG QUALITY SAG DRAWN LHO

PROJECT

CIRCLE K STORES, INC.

ANGIER, NC

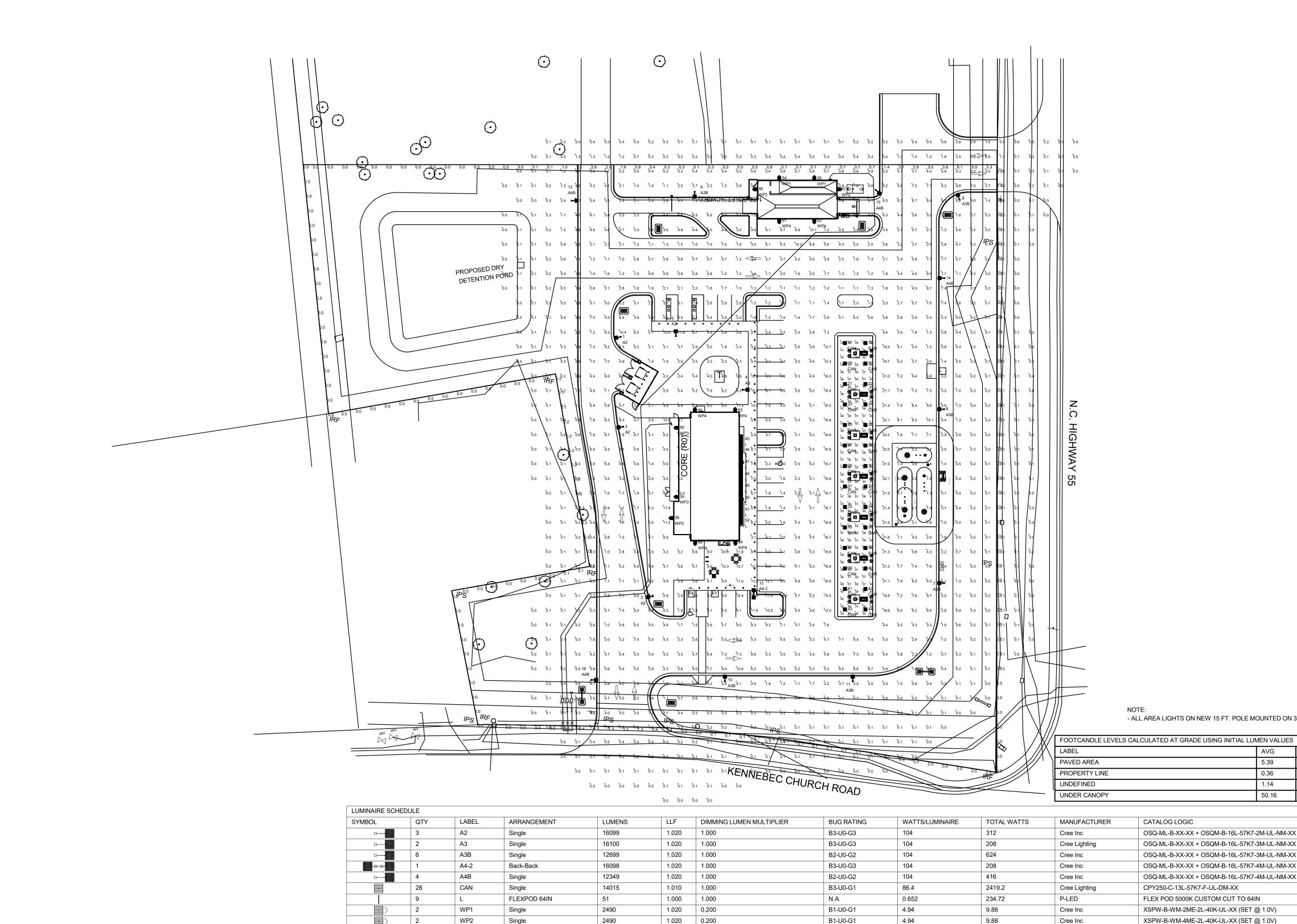
9706 KENNEBEC CHURCH ROAD, ANGIER, NC PROTOCYCLE# R1.2 12/XX/22



CIRCLE K STORE PROJECT NUMBER: 22130

ELECTRICAL SITE PLAN DETAILS

E1.1



SYMBOL	QIY		ARRAN
	3	A2	Single
	2	A3	Single
	6	A3B	Single
	1	A4-2	Back-Ba
	4	A4B	Single
*	28	CAN	Single
	9	L	FLEXPO
•>	2	WP1	Single
$\overline{}$	2	WP2	Single
•>	3	WP3	Single
• >	6	WP4	Single

ELECTRICAL SITE PHOTOMETRIC PLAN 1

1.020 1.000

1.020 1.000

6100

8873

B2-U0-G2

B2-U0-G2

47

70.82

141

424.92

Cree Inc

Cree Inc

XSPW-B-WM-4ME-8L-40K-UL-XX

LUM NO.	LABEL	MTG. HT.
1	A2	18
2	A2	18
3	A2	18
4	A3	18
5	A3	18
6	A3B	18
7	A3B	18
8	A3B	18
9	A3B	18
10	A3B	18
11	A3B	18
12	A4-2	18
13	A4B	18
14	A4B	14.5
15	A4B	18
16	A4B	18
17	CAN	15.5
18	CAN	15.5
19	CAN	15.5
20	CAN	15.5
21	CAN	15.5
22	CAN	15.5
23	CAN	15.5
24	CAN	15.5
25	CAN	15.5
26	CAN	15.5
27	CAN	15.5
28	CAN	15.5
29 30	CAN CAN	15.5 15.5
31 32	CAN CAN	15.5 15.5
32	CAN	15.5
34	CAN	15.5
35	CAN	15.5
36	CAN	15.5
37	CAN	15.5
38	CAN	15.5
39	CAN	15.5
40	CAN	15.5
41	CAN	15.5
42	CAN	15.5
43	CAN	15.5
44	CAN	15.5
45	L	10.625
46	L	10.625
47	L	10.625
48	L	10.625
49	L	10.625
50	L	10.625
51	L	10.625
52	L	10.625
53	L	10.625
54	WP1	14.5
55	WP1	14.5
56	WP2	14.5
57	WP2	14.5
58	WP3	9
59	WP3	9
60	WP3	9
61	WP4	14.5
62	WP4	14.5
63	WP4	14.5
64	WP4	14.5
65	WP4	14.5
66	WP4	14.5

LUMINAIRE LOCATION SUMMARY

- ALL AREA LIGHTS ON NEW 15 FT. POLE MOUNTED ON 3 FT. CONCRETE BASE

AVG MAX MIN AVG/MIN MAX/MIN 5.39 24.0 8.98 40.00 0.6 0.36 0.0 N.A. N.A. 6.1 1.14 17.8 0.0 N.A. N.A. 50.16 62 1.52 33 1.88 OSQ-ML-B-XX-XX + OSQM-B-16L-57K7-2M-UL-NM-XX OSQ-ML-B-XX-XX + OSQM-B-16L-57K7-3M-UL-NM-XX OSQ-ML-B-XX-XX + OSQM-B-16L-57K7-3M-UL-NM-XX + OSQ-BLSMF OSQ-ML-B-XX-XX + OSQM-B-16L-57K7-4M-UL-NM-XX OSQ-ML-B-XX-XX + OSQM-B-16L-57K7-4M-UL-NM-XX + OSQ-BLSMF XSPW-B-WM-2ME-2L-40K-UL-XX (SET @ 1.0V) XSPW-B-WM-4ME-2L-40K-UL-XX (SET @ 1.0V) XSPW-B-WM-4ME-6L-40K-UL-XX

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PROJECT

CIRCLE K STORES, INC.

ANGIER, NC

9706 KENNEBEC CHURCH ROAD, ANGIER, NC

PROTOCYCLE# R1.2 12/XX/22



CIRCLE K STORE PROJECT NUMBER: 22130

ELECTRICAL SITE PHOTOMETRIC PLAN

E1.2



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Jason C. Adams

1805 N 2ND ST JOB NO.: 29894 ROGERS, AR 72756 DESIGNED BY: LHO

479-636-5004

DATE

02/15/23

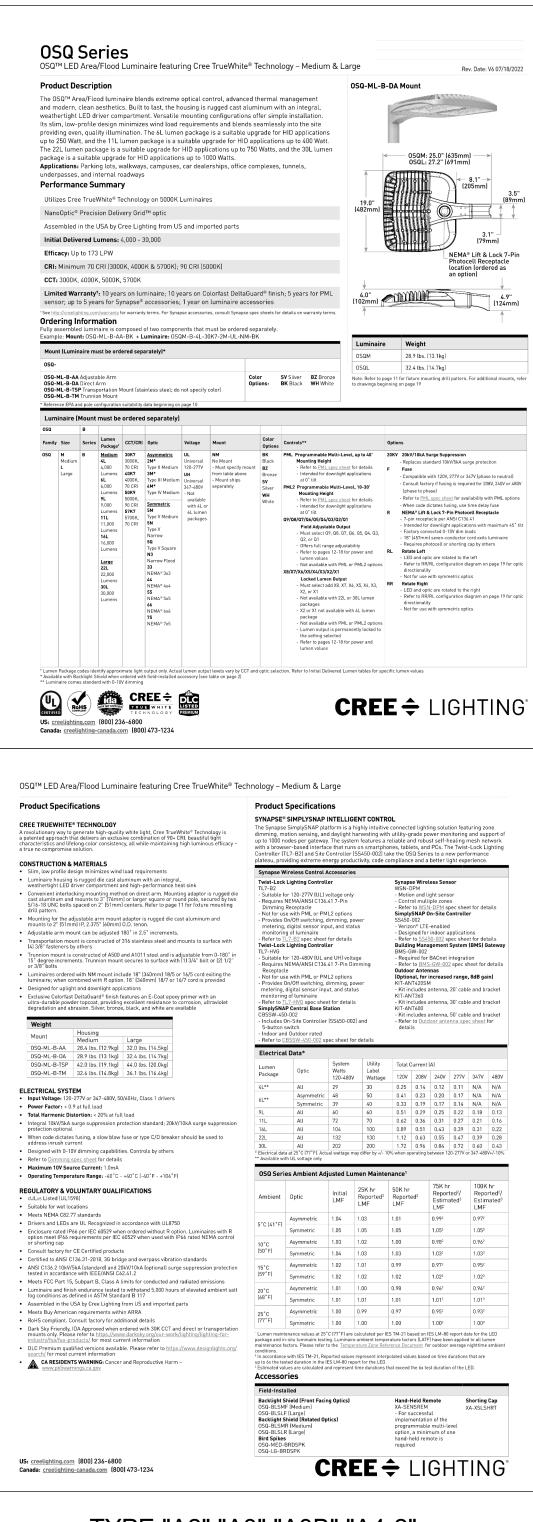
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SUITE 5268

REVISION riangle issue

OTP



<u>TYPE "A2", "A3", "A3B", "A4-2"</u> & "A4B" LIGHT FIXTURE

TYPE "CAN" LIGHT FIXTURE

<u>TYPE "WP1","WP2","WP3" &</u> "WP4" LIGHT FIXTURE

CPY Series - Version C

CPY250[®] LED Canopy/Soffit Luminaire

Product Description

The CPV250° LED Canopy/Soffit Luminaire has an extremely thin profile cons aluminum. It can be surface mounted easily from below the canopy deck and imaging of the LEDs is eliminated with a highly efficient patterned flat or 0.91 Applications: Petroleum canopies, CNG fueling stations, soffits Performance Summary Assembled in the USA by Cree Lighting from US and imported parts Initial Delivered Lumens: Up to 21,000 Efficacy: Up to 165 LPW CRI: Minimum 70 CRI (40K, 50K, 57K); 80 CRI (30K); 90 CRI (40K, 50K) CCT: 3000K, 4000K, 5000K, 5700K Limited Warranty': 10 years on Luminaire/10 years on Colorfast DeltaG sensor/up to 5 years for Synapse [®] accessories/1 year on field-installed. IP66 Rated (select models only) Class I, Division 2 Hazardous Location for select models "See http://creaking.com/warranty for warranty terms	can be pendant mounted. Direct (23mm) drop glass tens. Flat Lens	The XSPW™ LED wall mount luminaire has a slim, low profile design ini mounted applications. The rugged lightweight aluminum housing and n for installation over standard single gang J-Boxes and mud ring single allows for through-wired or conduit entry from the top, bottom, sides ar intended specifically for LED technology including a weathertight LED d management. Optic design features industry-leading NanoOptic [®] Precis multiple distributions. Applications: General area and security lighting Performance Summary NanoOptic [®] Precision Delivery Grid [™] optic Assembled in the U.S.A. of U.S. and imported parts CRI : Minimum 70 CRI (3000K, 4000K & 5700K); 90 CRI (5000K) CCT : 3000K, 4000K, 5000K Limited Warranty*: 10 years on luminaire/10 years on Colorfast Delt	nounting box are designed gang J-Boxes. The luminaire di fear. The housing design is iriver compartment and thermal sion Delivery Grid™ system in
Field-Installed Direct Mount Luminaires Canopy Uggrade Kits (18 ga. steel, except where noted) CyPA-8304: - hor use with Cree Lighting CAN-306 Luminaires, 16 ga. 5052 aluminum Xa-BXCCOW - for use with Elsco Franciscan, 22.06' [560mm] square, white XA-BXCCOW - for use with Elsco Franciscan, 22.06' [560mm] square, white XA-BXCCOW - for use with Elsco Franciscan, 22.06' [560mm] square, white XA-BXCCOW - for use with LSID Rokato or Masters, 22.50' [572mm] square, white XA-BXCCOW - for use with LSI Richmond or Whiteway River, 23.00' [580mm] XA-BXCCOW - for use with LSI Richmond or Whiteway River, 23.00' [580mm] XA-BXCCOW - Cor U (150mm] May A1' [10mm] NPT Stem XA-BXCCOEPI 24.07 [105mm] Beauty Plate 10ny [18 ga. steel], white XA-BXCCEPI 24.07 [165mm] Beauty Plate 10ny [18 ga. steel], white XA-BXCCEPI 24.07 26.17' [665mm] Beauty Plate 118 ga. steel] w/16' [406mm] XA-BXCCEPI 24.07 26.17' [665mm] Beauty Plate 118 ga. steel] w/16' [406mm] Backer Plate [16 ga. steel], white - For use in canopies where deck opening is larger than what is required for mounting the CP2/20 luminaire. Maximum deck opening 10.75' x 15' [406mm] Backer Plate [16 ga. steel], white - For use in canopies where deck opening is larger than what is required for mounting the CP2/20 luminaire. Maximum deck opening 10.75' x 15' [406mm] Backer Plate [16 ga. s	Held Remote NSREM USREM USREM USREM USREM USREM USREM T.27 (183mm) USREM (183mm) USREM (183mm) USREM (183mm) USREM (183mm) USREM (183mm) USREM (183mm) (182mm) (Field-Installed WM-PLT12** - 12' (305mm) Square WM-PLT14** - 14' (305mm) Square - Over bloes left by incumbent wall packs Hand-Held Remote Au-SENSREM - Over Support ** Must specify color	en of the programmable to of one hand-held remote is required $\frac{4.8^{*}}{(122mm)} \frac{3.8^{*}}{(97mm)}$ $\frac{1000}{1000} \frac{1000}{1000} \frac{1000}{1$
* Must specify color: BK (Black), BZ (Bronze), SV (Silver) or WH (White) Ordering Information		Example: XSPW-B-WM-2ME-2L-30K-UL-BK	
CPY250 C 2L 30K8 D UL U 2,000 3000K, 80 CRI 0,91" UL 0.91" 2777 E 4L 400K7, 70 CRI Drop Lens UH UH F UH	ar Wash White Programmable Multi-Level - Not available with PML control or K option - Available with UL votage only - Refer to <u>PML spec sheat</u> for details - Suitable for DML mount only - Not available with PML control or HZ option	XSPW B WM Wall ZME Type II Medium ZL 24/9 lumens Type II Medium 4,270 lumens SME 5,100 lumens SL 8,475 lumens	CT Valuage Color Options 90K 300K 300K 4000K - 70 CR1 4000K - 70 CR1 Universal 120-277V Universal 247-480V 467V 347V - 90 CR1 Black Bonze 500K 467V - 70 CR1 M. Multi-Lenel - Refer to Pwice With ML or PML Options - Available with UL and 34 voltage only 90 CR1 570 5700K - 70 CR1 - For use with P option only Black Bonze Silver White M. Multi-Lenel - Available with UL and 34 voltage only 97 CR1 5700K - 70 CR1 - For use with P option only Black Bonze Silver White - Available with UL and 34 voltage only 97 CR1 5700K 5700K - 70 CR1 - CR1 5700K - Option - For use with P option Black Bonze Silver White - Available with UL and 34 voltage only 97 CR1 5700K - 70 CR1 - CCT and optic selection. Reter to Initial Delivered Lumen tables for specific lumen values - Refer to FML Spec Sheet for details - Available with UL voltage only
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US: <u>creelighting.com</u> T (800) 236-6800 Canada: <u>creelighting-canada.com</u> T (800) 473-1234	CREE CIGHTING	US: <u>creelighting.com</u> (800) 236-6800 Canada: <u>creelighting-canada.com</u> (800) 473-1234	CREE 🖨 LIGHTING

XSP Series

Product Description

Rev. Date: V4 07/11/2022

DM Mount / DM Mount with HZ Option

XSPW™ LED Wall Mount Luminaire featuring Cree TrueWhite® Technology

130 Lightalarms

Rev. Date: VersionB V4 02/25/2020

Remote Fixture Camray[®] LED Series Low-profile, slim look and performance in a remote fixture Description Die-cast aluminium housing UV resistant polycarbonate lens Lamp type LED light engine with redundant connections Optional forward-throw light distribution, for applications of outdoor egress Optional dual-mode: normal and emergency LED lighting with separate AC inputs Optional high-lumen output Optional photo-switch: dusk-to-dawn control of normal lighting Optional remote test: infrared remote control 400-640 lumens Color temperature: 4000K Unit color Mounting Surface wall mount Universal J-Box mounting Approval UL 924 Listed Platinum gray NEMA-3R Damp and wet location listed 50°F to 104°F (10°C to 40°C) Warranty (subject to proper installation and maintenance) Unit: five-year full warranty White Dark bronze (painted) Detailed warranty terms located on page 197 or online at: www.lightalarms.com (U) NEMA-3R Table A - Spacing for NFPA101 (average = 1FC) - Average of 1 foot-candle Table B - Spacing for minimum illumination = 1FC - Minimum of 1 foot-candle unit to-c 9' 400 11' 550 4000K 6' X 50' 6' X 50' Standard 6' X 60' 6' X 60' With option -H Standard 9' 400 11' 550 4000K 6' X 28' 6' X 32' With option -H 6' X 32' 6' X 40' With option -FT 6' X 70' With option -FT 12' 460 12' 460 6' X 22' With option -FTH 15' 640 6' X 40' - With option -FTH 15' 640 6' X 40' 6' X 27' Note: The illumination level meets ALL the requirements of the Life Safe 1) Average of 1 foot-candle or more 2) Minimum at any point of 0.1 foot-candle or more 3) Makimum-ch-minimum limination unitormity ratio of 40:1 or less Indoor reflectance: 80/50/20 and 10-ft wide corrido Outdoor reflectance: 0/30/10 Photometry performance - Wide beam Photometry performance - Forward throw Lightalarms Dimensions (Dimensions are approximate and subject to change) 3" (7.5cm) 6-5/8" (16.8cm) 3" (7.5cm) G Side view Front view Power consumption chart AC, 2AC, ACDC, DC 0.12/0.08A 12W 0.11/0.08A 12W 0.18/0.11A 0.18/0.11A 18W All above, -H 14W (6VDC onl Ordering forma -FT= Forward throw lighting -H= High lumen output -40°F - 86°F (-40°C - 30°C) -P= Photo-switch (AC and ACDC only) -RC= Remote control - infrared (AC and ACDC only)²
 AC= AC-only
 B= Black

 ACDC= AC/6-12VDC remote
 DB= Dark bronze

 DC= 6-12VDC remote fixture
 OW= Off white

 2AC= AC-only two circuits: 120/120 or 277/277V
 PG= Platinum gray
 CAM= Camray® LED Example: CAMACDCB-H ³ Temperature range: -40°F - 122°F (-40°C + 50°C) ² With -RC option, order the remote control keypad (TB-RC1-L) separately

TYPE "W" LIGHT FIXTURE

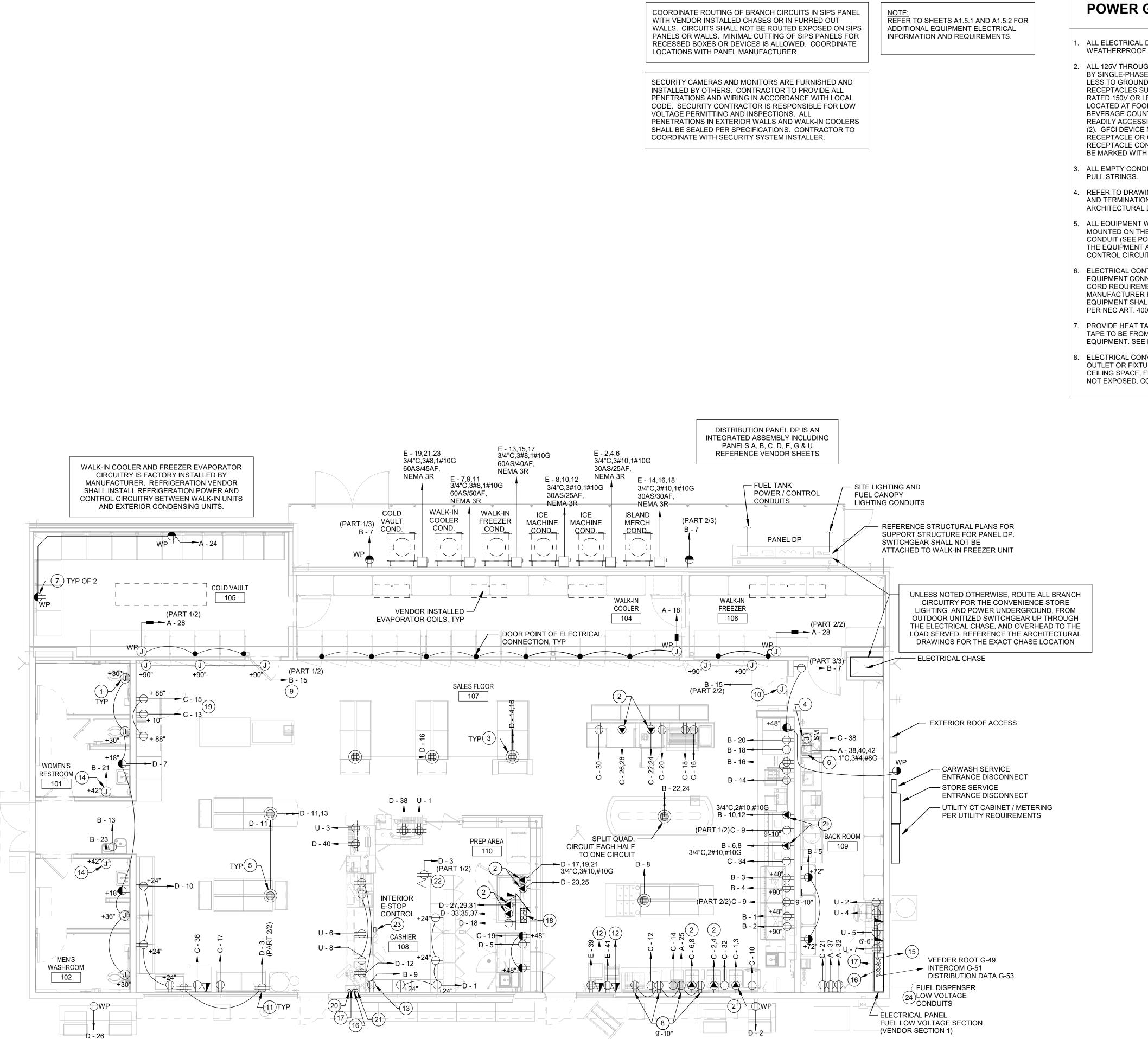
11921 Freedom Drive #1110 Reston, Va 20190 **t** 703.668.0086 rdcollaborative.com COPYRIGHT NOTICE This drawings is the property of the above referenced Professional and is not to be used for any purpose other than the specific project and site named herein, and cannot be reproduced in any manner without the express written permission from the professional PROFESSIONAL Jason C. Adams teamofchoice.com **SUITE 5268** 479-636-5004 1805 N 2ND ST JOB NO.: 29894 ROGERS, AR 72756 DESIGNED BY: LHO REVISION riangle issue DATE OTP 02/15/23 FOR INFORMATION ONLY PROFESSIONAL IN JCA PROJECT SAG QUALITY SAG DRAWN LHO PROJECT CIRCLE K STORES, INC. ANGIER, NC 9706 KENNEBEC CHURCH ROAD, ANGIER, NC PROTOCYCLE# R1.2 12/XX/22 **CIRCLE K STORE**

EXTERIOR LIGHT FIXTURE CUT SHEETS

PROJECT NUMBER: 22130

E1.3

ELECTRICAL FLOOR PLAN 1



ALL 125V THROUGH 250V RECEPTACLES SUPPLIED BY SINGLE-PHASE BRANCH CIRCUITS RATED 150V OR LESS TO GROUND, 50A OR LESS, AND ALL RECEPTACLES SUPPLIED BY THREE-PHASE CIRCUITS RATED 150V OR LESS TO GROUND, 100A OR LESS LOCATED AT FOOD PREPARATION, FOOD SERVICE OR BEVERAGE COUNTERS SHALL BE PROTECTED BY A READILY ACCESSIBLE GFCI DEVICE PER NEC 210.8(B) (2). GFCI DEVICE MAY BE LOCATED EITHER IN A RÉCEPTACLE OR CIRCUIT BREAKER. FACE PLATE OF RECEPTACLE CONTROLLED BY GFCI DEVICE SHALL

BE MARKED WITH GFCI PROTECTED SYMBOL.

PULL STRINGS. REFER TO DRAWING A1.5 FOR EQUIPMENT SCHEDULE AND TERMINATION REQUIREMENTS. REFER TO ARCHITECTURAL DRAWINGS FOR ISLAND DETAILS.

ALL EQUIPMENT WITH REMOTE CONDENSERS MOUNTED ON THE ROOF SHALL HAVE 1/2" EMPTY CONDUIT (SEE POWER GENERAL NOTE 3) BETWEEN THE EQUIPMENT AND THE REMOTE CONDENSER FOR CONTROL CIRCUITS.

ELECTRICAL CONTRACTOR SHALL VERIFY ALL EQUIPMENT CONNECTIONS, MOUNTING HEIGHTS AND CORD REQUIREMENTS WITH EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION. ALL EQUIPMENT SHALL BE LISTED FOR ITS INTENDED USE PER NEC ART. 400.7.

PROVIDE HEAT TAPE FOR ALL EXPOSED PIPING. HEAT TAPE TO BE FROM THE SAME CIRCUIT SERVING EQUIPMENT. SEE MECHANICAL SHEETS FOR DETAILS.

ELECTRICAL CONVEYANCES FROM BREAKERS TO OUTLET OR FIXTURE SHALL BE ENCLOSED WITHIN CEILING SPACE, FINISHED WALLS OR CABINETRY AND NOT EXPOSED. CODE 6-201.12.

POWER GENERAL NOTES

ALL ELECTRICAL DEVICES SHALL BE

ALL EMPTY CONDUITS SHALL BE PROVIDED WITH

KEYNOTES

- JUNCTION BOX FOR AUTOMATIC FLUSH SENSOR. COORDINATE EXACT MOUNTING HEIGHT WITH MANUFACTURER INSTRUCTIONS AND PLUMBING CONTRACTOR.
- PROVIDE SPECIAL OUTLET FOR COMPLETE CONNECTION OF EQUIPMENT. VERIFY EXACT NEMA CONFIGURATION WITH SUPPLED EQUIPMENT.
- PROVIDE FLUSH RECESSED HUBBELL FLOOR BOX WITH BRASS COVER PLATE FOR POWER TO DISPLAYS AND EQUIPMENT
- PROVIDE JUNCTION BOX FOR HARD WIRE CONNECTION TO RE-CIRC PUMP AND AQUA-STAT TIMER. PROVIDE MOTOR RATED SWITCH PER 422.31 (C). VERIFY EXACT LOCATION AND MOUNTING HEIGHT PRIOR TO ROUGH-IN.
- PROVIDE 3/4" CONDUIT UNDER SLAB FROM CASEWORK BACK TO WALL FOR 120V POWER TO FLOOR BOXES. ROUTE IN FIELD TO NEAREST ACCESSIBLE POINT AND MINIMIZE INTERFERENCES. REFER TO ARCHITECTURAL PLANS FOR MORE INFORMATION.
- WATER HEATER AT 208V 3PH. PROVIDE 100A 250V 3P+EQUIPMENT GROUND, NON-FUSIBLE DISCONNECT SWITCH INSTALLED IN READILY ACCESSIBLE LOCATION.
- MOUNT RECEPTACLE TO ACCESSIBLE CEILING IN COOLER / BEER CAVE FOR LOW VOLTAGE SIGNAGE. SEAL SLEEVE WITH POLY SILICON CAULKING TO PREVENT MOISTURE AND AIR FROM ENTERING AND DAMAGING THE TRANSFORMER AND LOW VOLTAGE WIRING.
- 8 PROVIDE JUNCTION BOX WITH DUPLEX RECEPTACLE FOR PLUG IN ABOVE THE CEILING GRID. 9 PROVIDE JUNCTION BOX ABOVE CEILING FOR HARDWIRED
- ELECTRICAL CONNECTION. 10 CO2 ALARM STROBE JUNCTION BOX. SINGLE GANG
- JUNCTION BOX MOUNTED 8" BELOW CEILING CENTERED ON DOOR WITH CONDUIT TO ACCESSIBLE BACKROOM CEILING SPACE FOR LOW VOLTAGE COMMUNICATION WIRING BY OTHERS.
- 11 PROVIDE FLUSH MOUNT RECEPTACLE IN CEILING FOR WINDOW DISPLAYS.
- 12 JUNCTION BOX WITH (1) 3/4" EMPTY CONDUIT TO NETWORK SWITCH IN OFFICE AREA FOR ATM DATA. 13 JUNCTION BOX AND RECEPTACLE FOR CO2 MONITOR
- CONTROL PANEL. CATEGORY 5 CONTROL WIRING TO BE CONCEALED WITHIN WALL. NO EXPOSED WIRING IN SALES AREA.
- 14 HAND DRYER: INSTALL PER MANUFACTURER INSTRUCTIONS.
- 15 (1) 2" EMPTY CONDUIT WITH PULL STRING TO MANAGER'S DESK.
- 16 (1) 2" EMPTY CONDUIT WITH PULL STRING FROM ELECTRICAL EQUIPMENT LOW VOLTAGE PANEL SECTION TO CHECKOUT CABINET. REFERENCE ELECTRICAL EQUIPMENT VENDOR INFORMATION.
- 17 (1) 1" EMPTY CONDUIT WITH PULL STRING FOR INTERCOM FROM ELECTRICAL LOW VOLTAGE PANEL SECTION TO CHECKOUT. REFERENCE ELECTRICAL EQUIPMENT VENDOR INFORMATION.
- 18 PROVIDE AND INSTALL CONDUIT(S) UNDER SLAB FROM THE PANELS IN THE BACK OF THE HOUSE TO THE FOOD PREP AREA IN FRONT OF STORE. TRANSITION FROM PVC TO GRC 90 DEGREE ELL TO STUB-UP THROUGH SLAB AND CONTINUE CIRCUIT TO EQUIPMENT RECEPTACLE USING ARMORED FLEX. PROVIDE A MEANS OF MOUNTING FOR RECEPTACLE UNDER THE EQUIPMENT. CONFIRM EXACT LOCATION AND REQUIREMENTS WITH OWNER PRIOR TO INSTALLATION.
- 19 WINE RACK RECEPTACLES: REFERENCE MANUFACTURER INSTRUCTION FOR EXACT LOCATION OF RECEPTACLES WITHIN DISPLAY.
- 20 (1) 2" EMPTY CONDUIT WITH PULL STRING FROM CHECKOUT CÁBINET TO MANAGER'S DESK. 21 PROVIDE (1) 2" EMPTY CONDUIT WITH PULL STRING FROM
- CHECKOUT CABINET TO NETWORK RACK IN BACKROOM AT MANAGER'S DESK AREA. 22 CEILING MOUNTED RECEPTACLE AND DATA OUTLET FOR
- CAR WASH MENU SCREEN. 23 INTERIOR E-STOP / CASHIER CONTROL PANEL MOUNTED UNDER COUNTER. FIELD VERIFY LOCATION WITH CONSTRUCTION MANAGER.
- 24 FUEL ISLAND DISPENSER / FUEL TANK POWER, CONTROL AND MONITORING CONDUIT ENTRANCES. REFERENCE SHEET E1.0, DETAILS 5/E1.1, 6/E1.1 AND FUEL SYSTEM VENDOR DRAWINGS.



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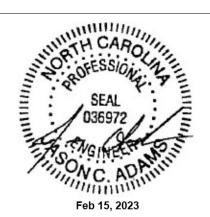
1805 N 2ND ST JOB NO.: 29894 ROGERS, AR 72756 DESIGNED BY: LHO

DATE

02/15/23

REVISION

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JCA PROJECT SAG QUALITY SAG DRAWN LHO

PROJECT

CIRCLE K STORES, INC.

ANGIER, NC

9706 KENNEBEC CHURCH ROAD, ANGIER, NC PROTOCYCLE# R1.2 12/XX/22

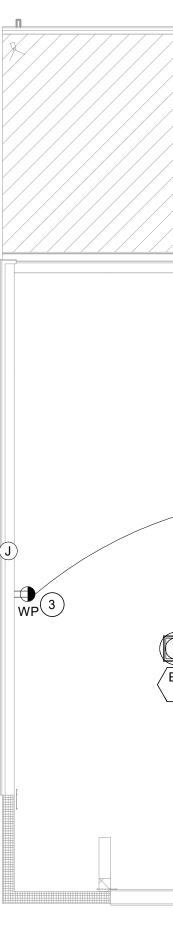




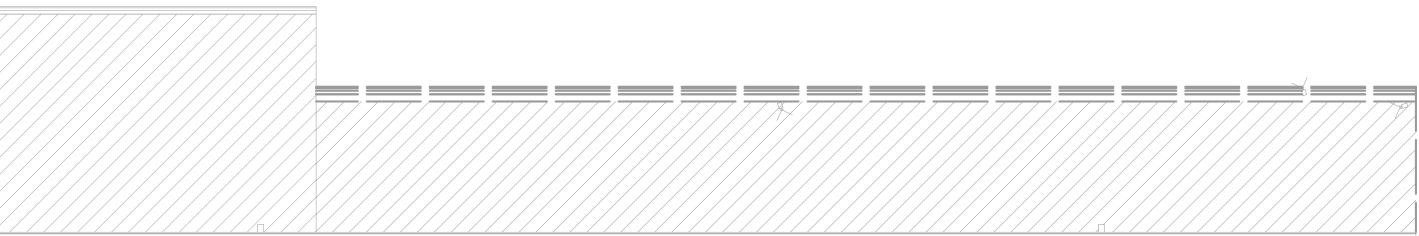
CIRCLE K STORE PROJECT NUMBER: 22130

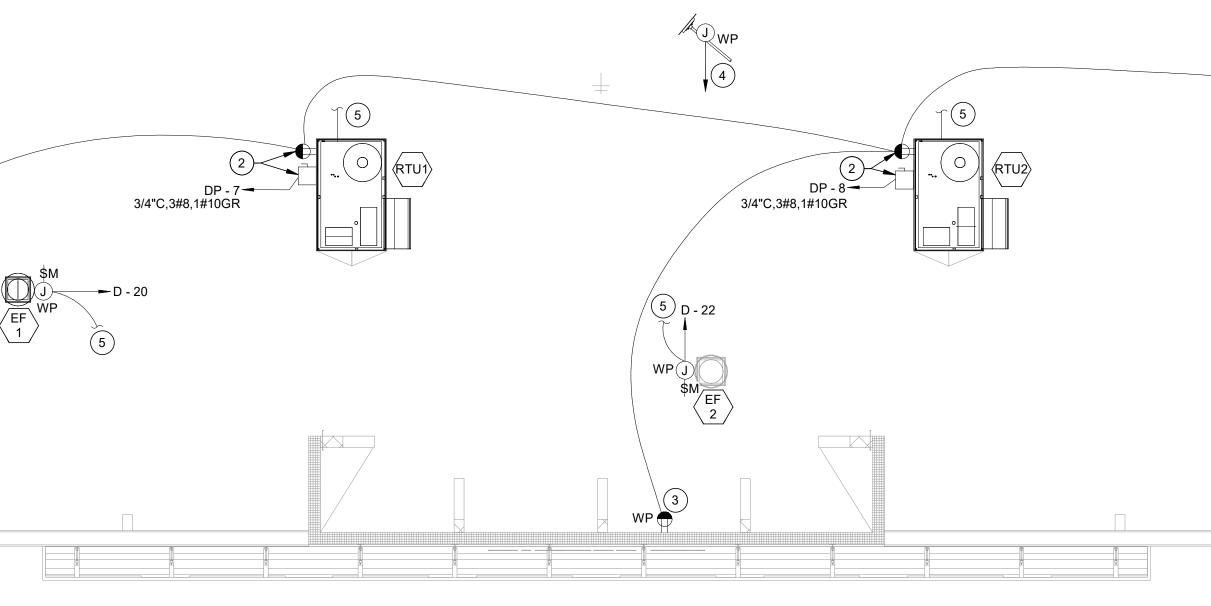


E2.0



	R(GEI
1.	ALL EXTERIOR I RATED.
2.	ALL EQUIPMENT MOUNTED ON T CONDUIT BETW REMOTE COND
3.	ROUTE CONDUI SAME WEATHER CONDENSATE F SHEET M1.2.1.







ROOF POWER SENERAL NOTES

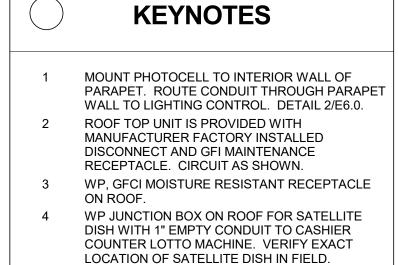
OR DEVICES SHALL BE WEATHERPROOF

IENT WITH REMOTE CONDENSERS ON THE ROOF SHALL HAVE (1) 1/2" EMPTY ETWEEN THE EQUIPMENT AND THE ONDENSER FOR CONTROL CIRCUITS.

NDUIT(S) FOR CONDENSERS THROUGH THERPROOF GOOSENECK USED FOR TE PIPING - REFER TO DETAIL #2 ON

4. SEAL ALL BUILDING PENETRATIONS.

5. HEAT TRACE TO BE PROVIDED IN COLD REGIONS.



EXTEND CONDUIT AND WIRE TO THERMOSTAT 5 FOR LINE VOLTAGE CONNECTION. COORDINATE WITH MECHANICAL CONTRACTOR.



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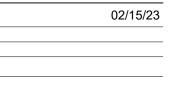
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CIRCLE K STORES, INC.

ANGIER, NC

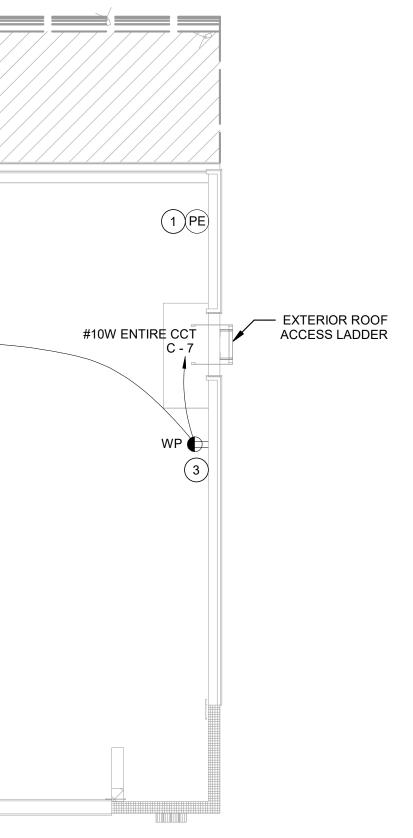
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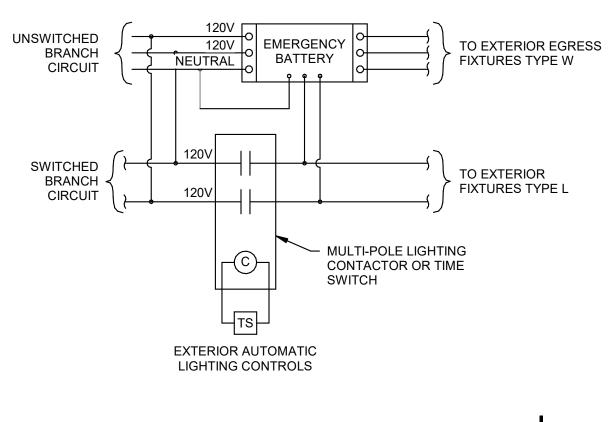


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ROOF POWER PLAN

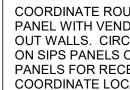
E4.0

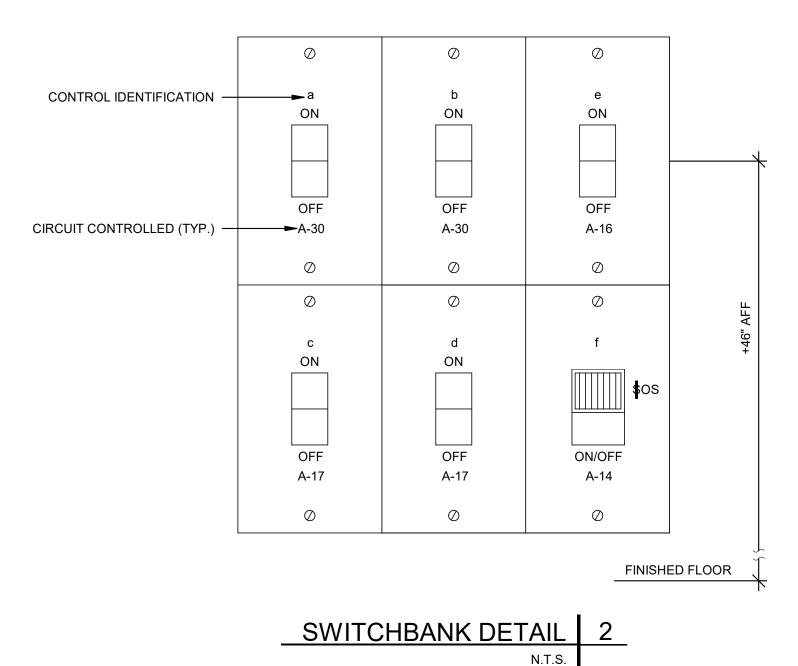












UNLESS NOTED OTHERWISE, ROUTE ALL BRANCH CIRCUITRY FOR THE CONVENIENCE STORE LIGHTING AND POWER UNDERGROUND, FROM OUTDOOR UNITIZED SWITCHGEAR UP THROUGH THE ELECTRICAL CHASE, AND OVERHEAD TO THE LOAD SERVED. REFERENCE THE ARCHITECTURAL DRAWINGS FOR THE EXACT CHASE LOCATION

ELECTRICAL LIGHTING PLAN 1 3/16" = 1'-0'

COORDINATE ROUTING OF BRANCH CIRCUITS IN SIPS PANEL WITH VENDOR INSTALLED CHASES OR IN FURRED OUT WALLS. CIRCUITS SHALL NOT BE ROUTED EXPOSED ON SIPS PANELS OR WALLS. MINIMAL CUTTING OF SIPS PANELS FOR RECESSED BOXES OR DEVICES IS ALLOWED. COORDINATE LOCATIONS WITH PANEL MANUFACTURER

LIGHTING GENERAL NOTES

- COORDINATE ALL WORK WITH OTHER TRADES AND THE PROJECT MANAGER.
- VERIFY LOCATION AND MOUNTING HEIGHT OF ALL LIGHT FIXTURES WITH THE ARCHITECT / OWNER PRIOR TO ROUGH-IN.
- C. THE EXIT, EMERGENCY AND NIGHT LIGHT FIXTURES SHALL NOT BE SWITCHED.
- D. RGS CONDUIT SHALL BE USED IN ALL EXTERIOR LOCATIONS.
- E. MINIMUM CONDUIT SIZE SHALL BE 1/2".

2/E6.0.

- F. MINIMUM WIRE SIZE SHALL BE #12 THHN/THWN CU. G. ALL EXTERIOR LIGHT FIXTURES SHALL BE CONTROLLED VIA PHOTOCELL. REFERENCE DETAIL
- 1. REFER TO THE PANEL SCHEDULES ON SHEETS E7.0 AND E7.1 FOR LOAD DESIGNATIONS. THERE SHALL BE NO SHARED NEUTRALS.
- CONDUIT(S) SHALL NOT BE ROUTED EXPOSED ON ANY EXTERIOR OR INTERIOR WALL.
- ALL EXTERIOR DEVICES SHALL BE WEATHERPROOF RATED.
- . REFER TO SHEET E0.0 FOR THE LIGHT FIXTURE SCHEDULE.
- PROVIDE STAINLESS STEEL SWITCH COVERS FOR ALL CUSTOMER ACCESSIBLE AREAS. (RESTROOMS, HALLWAY, COOLER, SALES AREA).
- M. ALL EMERGENCY EQUIPMENT SHALL BE LISTED TO UL924 AND BE INSTALLED PER NEC 700.
- N. OCCUPANCY SENSORS SHALL BE SET TO MAXIMUM DELAY PER MANUFACTURER INSTRUCTIONS.

KEYNOTES

- REFER TO ARCHITECTURAL SHEETS FOR 1 ACCESS PANEL FOR SIGNAGE IN THIS SOFFIT
- AREA. 2 PROVIDE WITH EMERGENCY BATTERY BACK-UP BALLAST - BODINE B50.
- FUTURE SIGNAGE LOCATION. 3
- PROVIDE TEMPERATURE SEAL / FIRE STOP FOR 4 ALL CONDUITS AND HOME RUNS IN THESE AREAS PER NEC 300.7.
- PROVIDE HIGHLITES EMERGENCY BATTERY 5 PACK - PCF 250 - BLACK IN COLOR (SEE DETAIL 3/E5.0)
- RESTROOM OCCUPANCY SENSOR: SET SENSOR 6 FOR 20 MINUTE TIME DELAY
- ROUTE CIRCUIT VIA PHOTOCELL CONTROLLED 7 CONTACTOR. REFERENCE DETAIL 2/E6.0.
- REFER TO SWITCH BANK DETAIL 2/E5.0 FOR 8 SWITCHING OF SALES FLOOR LIGHTING. VERIFY FINAL LOCATION WITH OWNER.
- LIGHTING AND DEVICES IN WALK-IN COOLER / 9 FREEZER ARE INSTALLED BY COOLER / FREEZER VENDOR. MAKE FINAL CONNECTION TO INSTALLED LIGHTING AT VENDOR CONNECTION POINT. FIELD VERIFY CONNECTION POINT WITH VENDOR.
- 120-VOLT LED LIGHTING POWER SUPPLY FURNISHED BY OWNER. CIRCUIT POWER SUPPLY TO 120-VOLT POWER AS SHOWN AND CIRCUIT TO 24-VOLT LED LIGHTING STRIP PER MANUFACTURER'S INSTRUCTIONS. MAXIMUM OF (2) LED LIGHTING STRIPS CIRCUITED TO EACH



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SUITE 5268 479-636-5004 1805 N 2ND ST JOB NO.: 29894 ROGERS, AR 72756 DESIGNED BY: LHO

DATE

02/15/23





JCA PROJECT SAG QUALITY SAG

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PROJECT

CIRCLE K STORES, INC.

ANGIER, NC

9706 KENNEBEC CHURCH ROAD, ANGIER, NC PROTOCYCLE# R1.2 12/XX/22



CIRCLE K STORE PROJECT NUMBER: 22130

LIGHTING PLAN



10

PÓWER SUPPLY.

	<i>check</i> Software Version CO rior Lighting Compli	
Project Information		
Energy Code: Project Title: Project Type:	2018 IECC Circle K 22130 Angier NC (BG 2989 New Construction	94)
Construction Site: 9706 Kennebec Church Ro Angier, North Carolina Additional Efficiency		Designer/ Jason C / Benchm 1805 N 2 Rogers, 479-636 JCA@tea
Credits: 1.0 Required 1.0 Reduced Lighting Power, Allowed Interior Lig	1.0 credit hting Power A	B loor Area (ft2)
3-Back Room (Common Spa 4-Hallway (Common Space ⁻ 5-Sales Floor (Retail:Sales A 6-Carwash Wash Bay (Auton 7-Carwash Equipment (Com 8-CW Entry (Common Space	mon Space Types:Restrooms) ice Types:Storage >=50 - <=1000 sq.ft.) Types:Corridor/Transition <8 ft wide) irea) motive:Vehicular Maintenance Area) mon Space Types:Electrical/Mechanical) e Types:Lobby - General)	133 134 296 57 2282 856 345 75
Proposed Interior Li	ommon Space Types:Electrical/Mechanical) ghting Power A iption / Lamp / Wattage Per Lamp / Ballas	42 Total B st Lamps/ Fixture
	non Space Types (Bestrooms)	
		1
2-Women's Restroom (Co	Downlight: LED Other Fixture Unit 25W: Dommon Space Types:Restrooms) Downlight: LED Other Fixture Unit 25W:	1
LED: B: 6" LED Recessed <u>2-Women's Restroom (Co</u> LED: B: 6" LED Recessed	Downlight: LED Other Fixture Unit 25W: <u>ommon Space Types:Restrooms)</u> Downlight: LED Other Fixture Unit 25W: <u>Space Types:Storage >=50 - <=1000 sq.ft.)</u>	_

LED: A, AE: 2x4 LED Troffer: LED Panel 41W: <u>5-Sales Floor (Retail:Sales Area)</u> LED: A, AE: 2x4 LED Troffer: LED Panel 41W:

Project Title: Circle K 22130 Angier NC (BG 29894) Data filename:

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps Fixture
LED: C, CE: 2x2 LED Troffer: LED Panel 33W: LED: B: 6" LED Recessed Downlight: LED Other Fixture Unit 25W:	1
LED: J: 8' LED Linear fixture: LED Other Fixture Unit 90W:	1
<u>6-Carwash Wash Bay (Automotive:Vehicular Maintenance Area)</u> LED: N: LED Other Fixture Unit 125W:	1
7-Carwash Equipment (Common Space Types:Electrical/Mechanical) LED: M: LED Other Fixture Unit 80W:	1
8-CW Entry (Common Space Types:Lobby - General) LED: P: LED Other Fixture Unit 46W:	1
<u>9-Carwash Electrical rm. (Common Space Types:Electrical/Mechanical)</u> LED: P: LED Other Fixture Unit 46W:	1
	Т
Interior Lighting PASSES: Design 2% better than code	
Interior Lighting Compliance	
Statement <i>Compliance Statement:</i> The proposed interior lighting design represented in this do specifications, and other calculations submitted with this permit application. The prodesigned to meet the 2018 IECC requirements in COM <i>check</i> Version COM <i>checkWeb</i> mandatory requirements listed in the Inspection Checklist.	oposed inte

Jason C. Adams P.E. Name - Title

Signature

Web Certificate

C Ac mar N 2n s, Ai 36-5	ontractor: dams k Group id Street kansas 72 004 nofchoice.c		
١	C Allowed Natts / f		D llowed Watts
tal A	0.77 0.77 0.41 0.59 1.10 0.50 0.39 0.90 0.39 Vllowed Wa		102 103 121 34 2510 428 135 68 16 3517
s/ re	C # of Fixture	D Fixture Watt.	E (C X D)
	6	21	126
	6	21	126
	4	41	164
	1	41	41
	29	41	1189
		Report dat	e: 02/15/23

1

/ è F		D Fixture Watt.	E (C X D)
	12	33	396
	3	21	63
	2	92	184
	6	145	870
	2	96	192
	1	45	45
	1	45	45
otal	Propose	d Watts =	3441

Page 1 of 8

COMcheck Software Version COMcheckWeb Exterior Lighting Compliance Certificate

Project Information Energy Code:

Project Title: Project Type: Exterior Lighting Zone

Angier, North Carolina

Construction Site:

Circle K 22130 Angier NC (BG 29894) New Construction 2 (Neighborhood business district (LZ2))

Construction Site: Owner/Agent: 9706 Kennebec Church Road

2018 IECC

Designer/Contractor: Jason C Adams Benchmark Group 1805 N 2nd Street Rogers, Arkansas 72756 479-636-5004 JCA@teamofchoice.com

Allowed Exterior Lighting Power В C D E Allowed Tradable Allowed Watts Area/Surface Category Quantity Watts / Wattage (B X C) fuel sales canopy (Free standing/attached sales canopy) 5479 ft2 0.4 2192 Yes 70000 ft2 0.04 Yes Drive/Parking (Driveway) 2800 800 ft2 0.65 Yes 520 Dining area Walkway < 10 feet wide 296 ft of 0.5 Yes 148 123 ft2 0.25 Yes Entry canopy 31 5690 Total Tradable Watts (a) = Total Allowed Watts = 5690 Total Allowed Supplemental Watts (b) = 400 (a) Wattage tradeoffs are only allowed between tradable areas/surfaces. (b) A supplemental allowance equal to 400 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces. Proposed Exterior Lighting Power В C D E Lamps/ # of Fixture (C X D) Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast Fixture Fixture Watt. fuel sales canopy (Free standing/attached sales canopy, 5479 ft2): Tradable Wattage 86 2408 LED: CAN: LED Canopy Light: LED Panel 80W: 28 1 Drive/Parking (Driveway, 70000 ft2): Tradable Wattage LED: A2, A3, A3B,A4-2,A4B: LED Roadway-Parking Unit 106W: 1 17 104 1768 <u>Dining area (800 ft2): Tradable Wattage</u> LED: WP3, WP4: Wall pack: LED Other Fixture Unit 46W: 1 2 47 94 <u>Walkway < 10 feet wide (296 ft of walkway length): Tradable Wattage</u> 1 5 47 235 LED: WP3, WP4: LED Other Fixture Unit 6.5W: <u>Entry canopy (123 ft2): Tradable Wattage</u> LED: L: 64" LED 24 volt tape: LED Other Fixture Unit 40W: 1 8 44 352 Total Tradable Proposed Watts = 4857

Project Title: Circle K 22130 Angier NC (BG 29894) Data filename:

 Exterior Lighting PASSES: Design 20% better than code

 Exterior Lighting Compliance

 Statement

 Compliance Statement:
 The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2018 IECC requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

 Jason C. Adams P.E.
 O2/15/23

 Name - Title
 Signature
 O2/15/23

Report date: 02/15/23

Page 3 of 8



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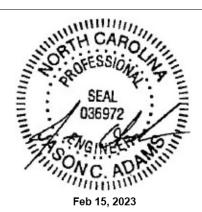
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PROJECT

CIRCLE K STORES, INC.

ANGIER, NC

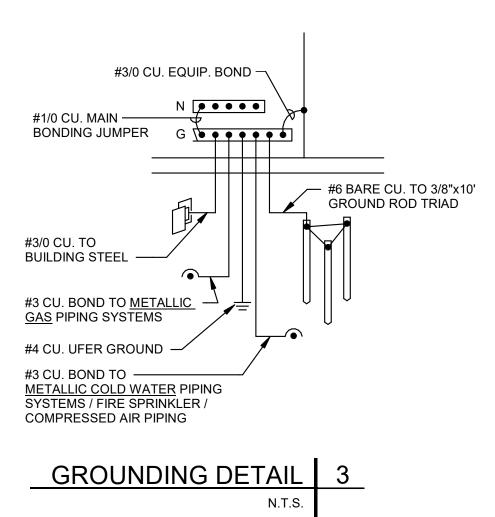
9706 KENNEBEC CHURCH ROAD, ANGIER, NC_____ PROTOCYCLE# R1.2 12/XX/22



CIRCLE K STORE PROJECT NUMBER: 22130

> LIGHTING COMPLIANCE REPORT

E5.1

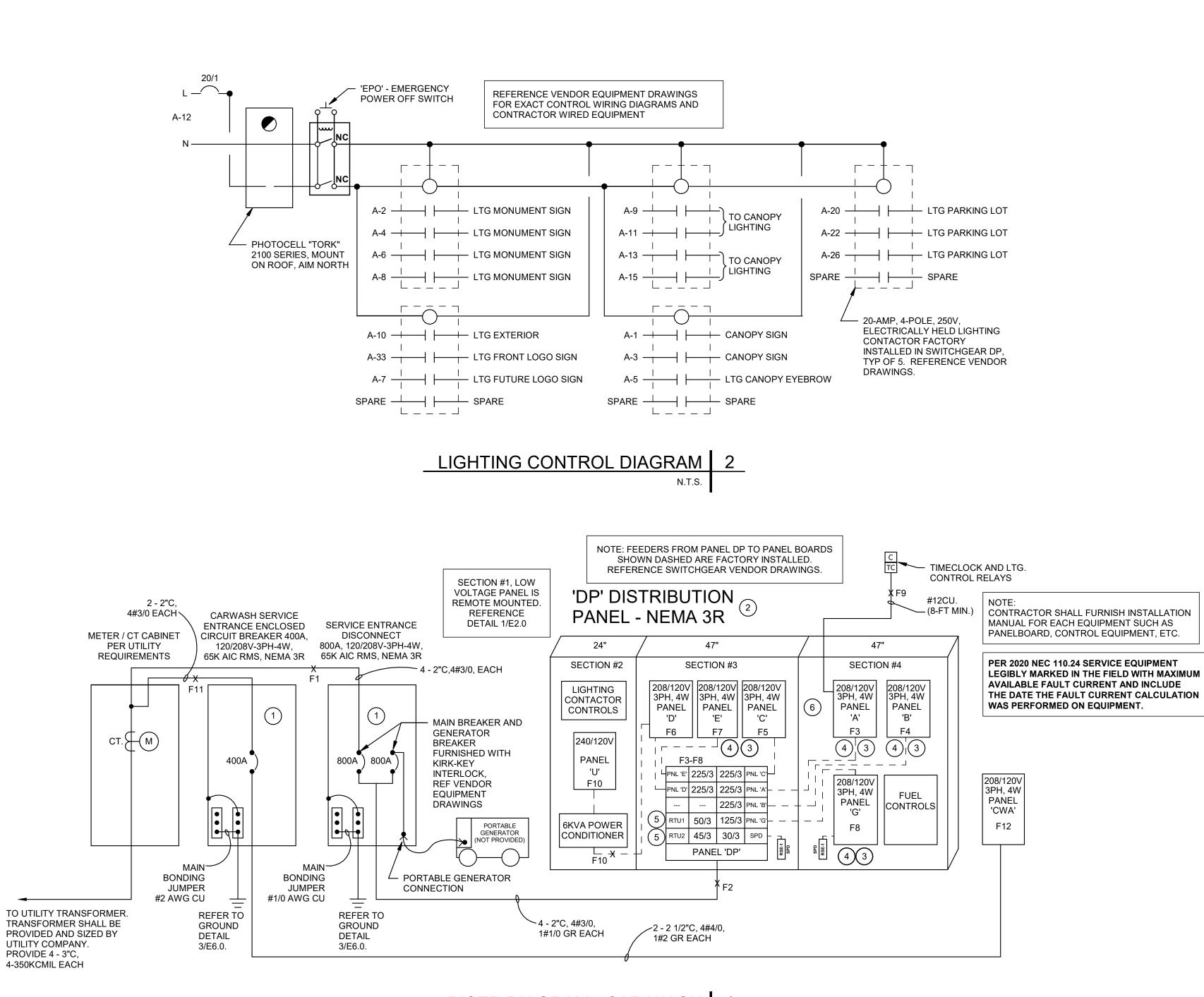


SERIES RATING GENERAL NOTES

1. THE MOTOR CONTRIBUTION TO THE FAULT CURRENT MEETS

THE 1% CRITERIA STATED IN NEC 240.86(C)

2. NO DESIGN CHANGES MAY BE MADE TO THE SYSTEM WITHOUT THE PRIOR APPROVAL OF THE DESIGN ELECTRICAL ENGINEER AND THE ELECTRICAL INSPECTOR.
ONE-LINE KEYNOTES
 THIS SERVICE IS A SERIES RATED SYSTEM: 2-TIER 65/10. ALL SERVICE ENTRANCE EQUIPMENT SYSTEM COMPONENTS SHALL BE RATED 65K, WITH SERIES RATED DOWNSTREAM.
 CONTRACTOR SHALL LABEL SERVICE ENTRANCE EQUIPMENT "CAUTION - SERIES RATED SYSTEM (65). 65,000 AMPS AVAILABLE IDENTIFIED REPLACEMENT COMPONENT REQUIRED." IN ACCORDANCE WITH NEC 110.22.
 CONTRACTOR SHALL LABEL PANEL(S) "CAUTION - SERIES RATED SYSTEM ("X"). "X" AMPS AVAILABLE IDENTIFIED REPLACEMENT COMPONENT REQUIRED IN ACCORDANCE WITH NEC 110.22". (REFER TO SHORT CIRCUIT CALCULATIONS FOR ACTUAL AMPS TO BE LABELED).
 CIRCUIT BREAKERS SHALL BE A BOLT-ON TYPE U.L. LISTED SERIES RATED COMBINATION WITH THE BREAKERS AT DISTRIBUTION PANEL "DP".
5. REFER TO E4.0 ROOF POWER PLAN FOR WIRE AND CONDUIT SIZE FOR ROOF TOP UNITS.
 MAXIMUM CIRCUIT BREAKER HEIGHT EQUAL TO 6'-7" AFF OR AFG.



RISER DIAGRAM - CAR WASH 1

rdc.

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∆ ISSUE	DATE
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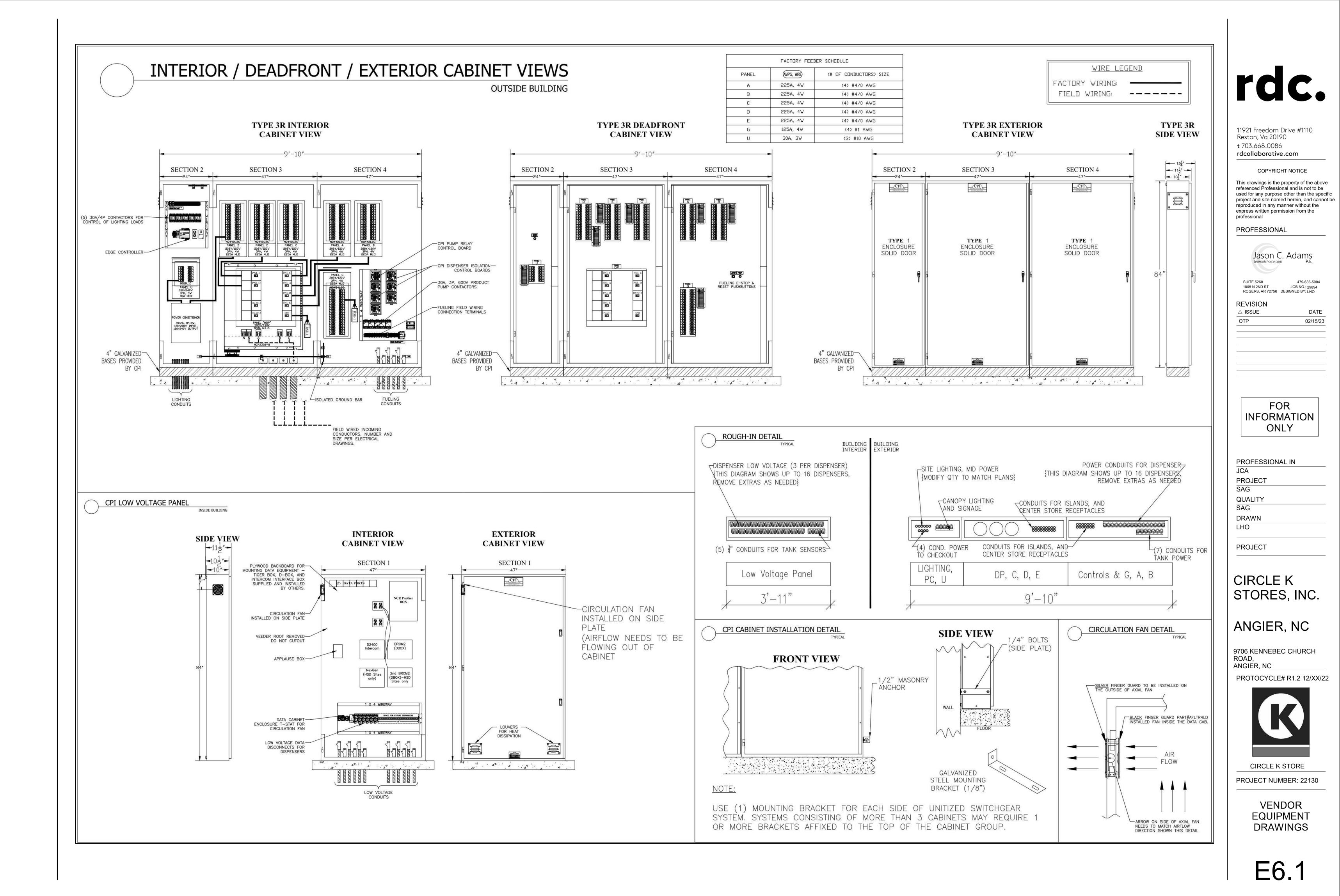
9706 KENNEBEC CHURCH ROAD, ANGIER, NC PROTOCYCLE# R1.2 12/XX/22

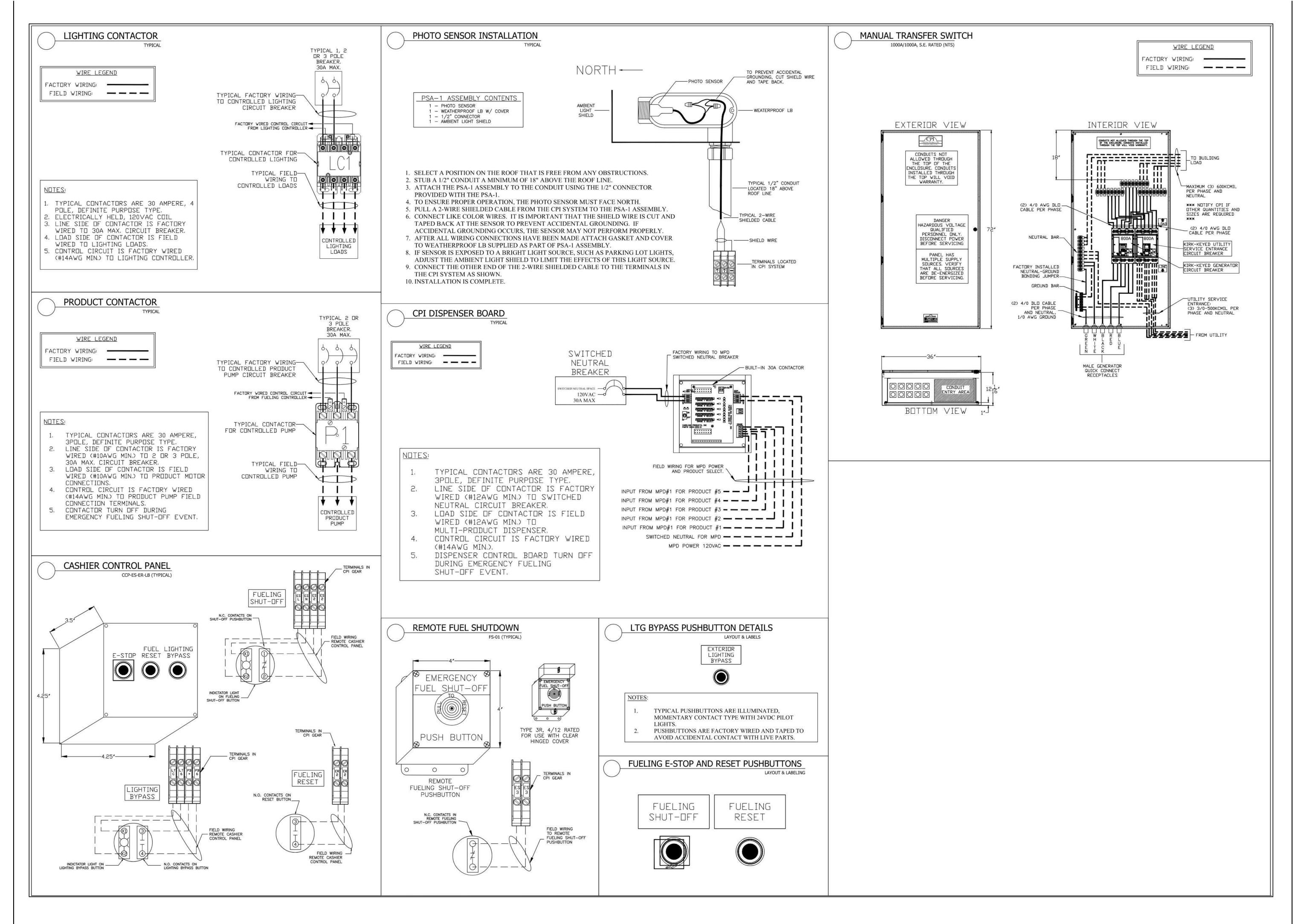


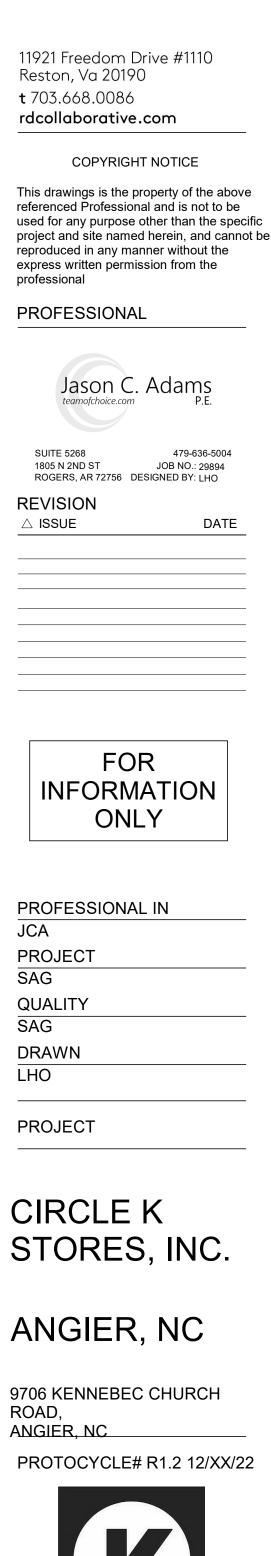
CIRCLE K STORE
PROJECT NUMBER: 22130

CALCULATIONS AND SCHEMATICS

E6.0





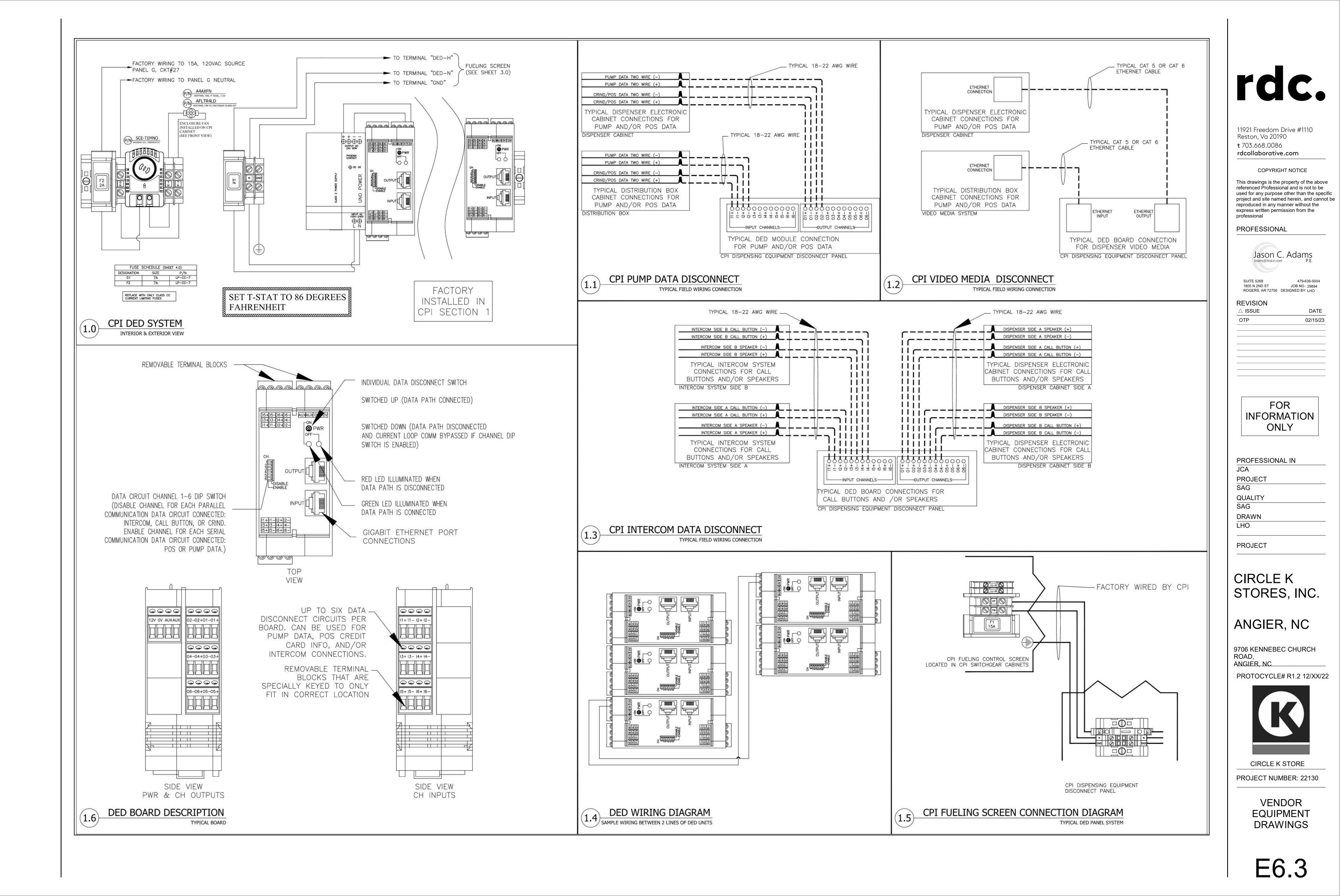




CIRCLE K STORE
PROJECT NUMBER: 22130



E6.2



				Bus	Rating:	225 A				Main R	ating l	Jpstrea	m: 225	δA		Location: DIST.	DP	
PA	NEL	BOARD		V	oltage:	208Y/	120 V				Ма	ains Ty	pe: M.L	0.	Busb	ar Material: CU		
Α				s	ystem:	3Ø, 4	W				A.I.	C. Ratii	1g: 65,	000 A	Grou	nd Busbar: Yes		
~				Мо	unting:	Cabin	et				Full	y / Serie	es: Ser	ies	Neut	ral Busbar: 100%		
Statu	s: Ne	w			-		In-Doo	r		Branc	h Brea	- aker Tyj	oe: Bol	t-on	IG Grou	nd Busbar: No		
				Nema	Rating:			-				eed Ty				Skirt Type: None		
Furni	shed	by Owner, installed by EC	Fe	ed Thru	-							ninatio				Sections: 1		
	Sheu										Ten		13. 75			Sections.		
CCT No.	Load Code	Load Description	Notes	Brkr Size	Poles		A		в		C	Poles	Brkr Size	Notes	Load De	scription	Load Code	
1	10	FUEL CANOPY SIGN	Notes	20 A	1	1.20	0.96					1	20 A	Notes	LTG MONUMENT		10	2
3	10	FUEL CANOPY SIGN		20 A	1	1.20	0.00	1.20	0.96			1	20 A		LTG MONUMENT		10	4
5	10	FUEL CANOPY EYEBROW		20 A	1			1.20	0.00	0.54	0.96	1	20 A		LTG MONUMENT		10	6
7	10	LTG. BUILDING SIGN (FUTURE)		20 A	1	0.60	0.96			0.01	0.00	1	20 A		LTG MONUMENT		10	8
9	4.0							0.60	1.12			1	20 A		LTG. EXTERIOR BU	JILDING	10; 1	10
11	10	FUEL CANOPY LIGHTING		20 A	2					0.60	0.30	1	20 A		MISC LTG CONT	ACTOR	3	12
13	10	FUEL CANOPY LIGHTING		20 A	2	0.60	0.18					1	20 A		LTG. BACK ROOM	/ OFFICE	1	14
15	10			20 A	2			0.60	0.06			1	20 A		LTG. COFFEE & DF	RINKS	1	16
17	1	LIGHTING CASHIER / PREP		20 A	1					0.40	0.60	1	20 A		LTG/HTR WALK-IN	CLR DOORS	1	18
19		SPARE		20 A	1	0.00	0.10					1	20 A		LTG. EXTERIOR PA		10	20
21	1	LTG. COOLER / COLD VAULT		20 A	1			0.23	0.73			1	20 A		LTG. EXTERIOR PA		10	22
23		FILLER SPACE			1						0.65	1	20 A		LTG. COOLER SIG		2	24
25	2	LED FRAME - COFFEE		20 A	1	0.20	0.52					1	20 A		LTG. EXTERIOR PA		10	26
27	1	LTG. RESTROOMS / STOCKROOM		20 A	1			0.25	1.20	0.00	4.45	1	20 A		LTG/HTR COLD VA		1	28
29		SPARE FILLER SPACE		20 A	1		0.18			0.00	1.45	1	20 A 20 A		LTG. SALES FLOO DOOR CHIME	K	1	30 32
31 33	 10	CIRCLE K FRONT LOGO SIGN		 20 A	1		0.10	0.15	1.56			1	20 A		AIR MACHINE		4	32
35		FILLER SPACE		20 A	1			0.15	1.50		1.56	1	20 A		AIR MACHINE		4	36
37	2	IRRIGATION CONTROLS		20 A	1	0.30	8.00				1.50	1	20 A				4	38
39	4	CAR WASH VACUUM		20 A	1	0.00	0.00	1.80	8.00			3	90 A		WATER HEATER		3	40
41	4	CAR WASH VACUUM		20 A	1				0.00	1.80	8.00	Ĩ						42
			Total	Connec	t Load:	13	.80	18	.46		.86	kVA						1
		and Loads May Vary From Connected			Amps:		5 A		8 A		4 A	Amps			Circuit Numberi	ng By Pole Position	Circuit	
		Exact Sectors Load Classification	C	Connect	ed Load	d	Dem	and Fa	ctor	Est	timated	d Dema	nd		Panel	Totals		
	0	Lighting - Non-Continuous		0.0	າດ			0.00%			0	00						
	1	Lighting - Continuous		5.2				25.00%	, D		6.				Total Conn. Load:	49.12		
	2	Receptacles		1.:	33		1	00.00%	, D		1.	33			Total Est. Demand:	53.32		
	3	Special Loads		24.	.30		1	00.00%	, D		24	.30			Total Conn.:	136 A		
	4	Motors		6.	72		1	00.00%	, D		6.	72			Total Est. Demand:	148 A		
	5	Kitchen (Commercial)		0.0	00			0.00%			0.	00						
	6	Heating		0.0				0.00%				00						
	7	Cooling		0.0				0.00%				00						
	9	Computer Outlets		0.0				0.00%				00			Spare Capacity:			
	10	Exterior Lighting		11.				25.00%	D			.40		Spar	e Capacity Percent:	66		
	11	Miscellaneous - Continuous		0.0				0.00%				00						
	12	Modular Furniture Outlets		0.0	00			0.00%			0.	00						

				Bus I	Rating:	225 /	Ą		I	Main R	-	Jpstrea				Location: DIST	DP	
PA	NEL	BOARD		V	oltage:	208Y	′/120 V				Ма	ains Typ	De: M.L	0.	Busba	ar Material: CU		
D				S	ystem:	3Ø, 4	4W				A.I.	C. Ratin	ig: 65,	000 A	Grou	nd Busbar: Yes		
_				Mo	unting:	Cabi	net				Full	y / Serie	es: Ser	ies	Neut	ral Busbar: 100%)	
Statu	IS: Nev	N			Trim:	Door	-In-Doo	r		Branc	h Brea	aker Typ	be: Bol	t-on	IG Grou	nd Busbar: No		
				Nema	Rating:	3R						eed Typ				Skirt Type: None		
Furn	ished	by Owner, installed by EC	Fe	ed Thru	-							nination				Sections: 1		
	Load Code	Load Description	Notes	Brkr Size	Poles		A	E	3			Poles	Brkr Size	Notes	Load Des			d CCT e No.
1	2	CIGARETTE BACK BAR RECS.		20 A	1	1.33						1	20 A	4,8	VENDING MACHIN		2	2
3	2	CAR WASH MENU SCREEN		20 A	1			0.54				1			FILLER SPACE			4
5	2	R206 UNDER COUNTER REFRIG	4	20 A	1					0.28		1			FILLER SPACE			6
7	2	REC. RESTROOMS		20 A	1	0.36	0.36					1	20 A		H402 BAKERY CAS	E / GONDOLA	2	8
9		SPARE		20 A	1			0.00	0.54			1	20 A		RECS. EATING AR	EA	2	10
11	2	GONDOLA FLOOR RECS.		20 A	1					0.36	0.72	1	20 A		REC. POS		2	12
13	2	GONDOLA FLOOR RECS.		20 A	1	0.36	0.72					1	20 A		M001 GONDOLA FI	OOR RECS.	2	14
15		FILLER SPACE			1				0.36			1	20 A		M001 GONDOLA FI		2	16
17										1.93	0.24	1	20 A		R202 27" U.C. FREI	EZER	5	18
19	5	H201 COMBI OVEN		25 A	3	1.93	0.36					1	20 A		EF1		4	20
21								1.93	0.36			1	20 A		EF2		4	22
23	5	H202 VENTLESS HOOD		20 A	2					0.05		1			FILLER SPACE			24
25	-					0.05	0.18					1	20 A	4,8	VENDING MACHIN	E	2	26
27	_				_			2.16				1			FILLER SPACE			28
29	5	H211 UNOX SPEEDPRO OVEN		20 A	3					2.16		1			FILLER SPACE			30
31						2.16		0.40				1			FILLER SPACE			32
33	_	H211 UNOX SPEEDPRO OVEN		00.4				2.16		0.40		1			FILLER SPACE			34
35 37	5	(OPTIONAL)	8	20 A	3	0.40	0.36			2.16		1	 20 A		FILLER SPACE	DECEDT		36
39						2.16	0.30	2.82	0.36			1	20 A		SELF CHECK DRN		2	40
41	2	PANEL U VIA 6KVA POWER CONDITIONER	9	40 A	2			2.02	0.30	3.24		1	20 A		FILLER SPACE	RECEFI		40
			Total C	Connect	t Load:	1(0.51	11	23		.14	kVA						
	Dema	nd Loads May Vary From Connected			Amps:		8 A	94	-		1 A	Amps			Circuit Numberi	ng By Pole Positio	n Circui	it
		Because of Demand Factors]			0			
Load	d Code	es Load Classification	C	Connect	ed Loa	d	Dem	and Fa	ctor	Est	timated	d Demai	nd		Panel	Totals		
	0	Lighting - Non-Continuous		0.0	00			0.00%			0.	00						
	1	Lighting - Continuous		0.0	00			0.00%			0.	00			Total Conn. Load:	32.88		
	2	Receptacles		13.	.07		8	38.25%			11	.54			Total Est. Demand:	25.62		
	3	Special Loads		0.0	00			0.00%			0.	00			Total Conn.:	91 A		
	4	Motors		0.7	72		1	00.00%	Ď		0.	72			Total Est. Demand:	71 A		
	5	Kitchen (Commercial)		19.	.09		7	70.00%			13	.36						
	6	Heating		0.0	00			0.00%			0.	00						
	7	Cooling		0.0	00			0.00%			0.	00						
	9	Computer Outlets		0.0	00			0.00%			0.	00			Spare Capacity:	154 A		
	10	Exterior Lighting		0.0	00			0.00%			0.	00		Spar	e Capacity Percent:	32		
				~ ~ ~	20			0.00%			0	00						
	11	Miscellaneous - Continuous		0.0	50			0.00%			0.	00						

				Bus	Rating:	225 A	<u>۱</u>			Main R	ating l	Jpstrea	m: 225	A		Location: DIST.	DP	
PA	NEL	BOARD		N	/oltage:	208Y/	/120 V				Ма	ains Typ	be: M.L	0.	Busb	ar Material: CU		
В				5	System:	3Ø, 4	W				A.I.	C. Ratir	1g: 65,	A 000	Grou	nd Busbar: Yes		
				Мо	ounting:	Cabin	net				Full	v / Serie	es: Ser	ies	Neut	ral Busbar: 100%		
Stati	ıs: Nev	w.			•	Door-		r		Branc		ker Typ			IG Grou	nd Busbar: No		
Otall	13. 1101	•		Nomo	Rating:		III-D00	1		Drane		eed Typ				Skirt Type: None		
-			г.		-													
Furn	isned i	by Owner, installed by EC	Fe		u Lugs:	No					Iern	ninatior	1S: 75°			Sections: 1		
	Load Code	Load Description	Notes	Brkr Size	Poles		A		в		C	Poles	Brkr Size	Notes	Load De	scription	Load Code	
1		B001 12-HEAD SODA FOUNTAIN		20 A	1	0.62					_	1	20 A		B102 ICE MAKER		2	2
3	2	B001 12-HEAD SODA FOUNTAIN		20 A	1			0.62	0.60			1	20 A		B101 ICE MAKER		2	4
5	2	REC. BIB EQ B601, B602, B603		20 A	1					0.80	2.40	_	00.4				_	6
7	2	RECS. GENERAL BACK RM		20 A	1	0.90	2.40					2	30 A		B301 4-HEAD FRO	STED VIPER	3	8
9	2	B503 REC. CO2 DETECTION	3	20 A	1			0.18	2.40			2	20.4				3	10
11		SPARE		20 A	1					0.00	2.40	2	30 A		B301 4-HEAD FRO		<u>ہ</u>	12
13	2	WATER COOLERS		20 A	1	0.18	1.50					1	20 A		H303 U.C. MICROW		5	14
15	1	COLD VAULT OVAL SIGNS LED		20 A	1			0.20	0.61			1	20 A		H101/H102 CHEES		5	16
17		SPARE		20 A	1					0.00	1.50	1	20 A		H303 U.C. MICROV		5	18
19		FILLER SPACE			1		0.54					1	20 A		H104 COLD COND		5	20
21	3	WOMENS HAND DRYER	2	20 A	1			0.92	0.16			1	20 A			CASE FANS/HTRS	4	22
23	3	MENS HAND DRYER	2	20 A	1					0.92	0.15	1	20 A		R309 SCA REFRG	CASE LIGHTS	1	24
25		FILLER SPACE			1							1			FILLER SPACE			26
27		FILLER SPACE			1							1			FILLER SPACE			28
29		FILLER SPACE			1							1			FILLER SPACE			30
31		FILLER SPACE			1							1			FILLER SPACE			32
33		FILLER SPACE			1							1			FILLER SPACE			34
35 37		FILLER SPACE FILLER SPACE			1							1			FILLER SPACE			36
39		FILLER SPACE			1							1			FILLER SPACE			40
41		FILLER SPACE			1							1			FILLER SPACE			40
41			Total (t Load:	6	27	5	.69	-	17	kVA			TILLER OF AGE			42
		nd Loads May Vary From Connected Because of Demand Factors	TOLAT		Amps:		27 3 A		7 A) A	Amps			Circuit Number	ing By Pole Position	Circuit	
Loa	d Code	es Load Classification	C	onnect	ted Loa	d	Dem	and Fa	ctor	Est	timated	d Dema	nd		Panel	Totals		
	0	Lighting - Non-Continuous		0.	00			0.00%			0.0	00						
	1	Lighting - Continuous		0.	35		1	25.00%	6		0.4	44			Total Conn. Load:	20.13		
	2	Receptacles		4.	03		1	00.00%	6		4.0	03			Total Est. Demand:	18.97		
	3	Special Loads		11	.44		1	00.00%	6		11.	.44			Total Conn.:	56 A		
	4	Motors		0.	16		1	00.00%	6		0.	16			Total Est. Demand:	53 A		
	5	Kitchen (Commercial)		4.	15		7	70.00%)		2.9	91						
	6	Heating		0.	00			0.00%			0.0	00						
	7	Cooling		0.	00			0.00%			0.0	00						
	9	Computer Outlets		0.	00			0.00%			0.0	00			Spare Capacity:	172 A		
	10	Exterior Lighting			00			0.00%			0.0			Spar	e Capacity Percent:	23		
	11	Miscellaneous - Continuous			00			0.00%		_	0.0							
	12	Modular Furniture Outlets		0.	00			0.00%			0.0	00						

				Bus	Rating:	225 A				Main R	ating l	Jpstrea	m: 225	A		Location: DIST	DP	
PA	NEL	BOARD		v	oltage:	208Y/	120 V				Ма	ins Typ	e: M.L	0.	Busba	ar Material: CU		
С				s	system:	3Ø. 4	N				A.I.	C. Ratin	ia: 65.0	A 000	Grou	nd Busbar: Yes		
C					unting:							y / Serie	-			ral Busbar: 100%		
Ctot.	No			WO	-		er In-Door			Brono							,	
Stati	ıs: Ne	w					In-Door			Branc		iker Typ				nd Busbar: No		
					Rating:							eed Typ				Skirt Type: None		
Furn	ished	by Owner, installed by EC	Fe	ed Thru	Lugs:	No					Tern	ninatior	is: 75°	C CU		Sections: 1		
CCT No.	Load Code		Notes	Brkr Size	Poles		4	E	3		2	Poles	Brkr Size	Notes	Load Des	scription	Load Code	
1		C001 COFFEE BREWER			0	1.66	1.66					0	00 A				0	2
3	2			20 A	2			1.66	1.66			2	20 A		C001 COFFEE BRE	WER	2	4
5		SPARE		20 A	1					0.00	1.66	2	20.4				2	6
7	2	ROOF RECEPTACLES		20 A	1	0.90	1.66					2	20 A		C001 COFFEE BRE		2	8
9	2	FROSTER, POLAR POP BACKGRND		20 A	1			0.36	1.80			1	20 A		C002 5-HEAD CAPI	PUCCINO	2	10
11	2	HOT BOX - BACKFLOW PREVENTER	8	20 A	1					1.20	0.67	1	20 A		C101 2 EA2 VALV		2	12
13	2	R201 WINE REFRIG		20 A	1	0.65	0.78					1	20 A		C201 COUNTERTC	P ICE MAKER	2	14
15	2	WINE RACK RECEPTS		20 A	1			0.72	1.54			1	20 A		H001 HOT DOG RC	DLLER	5	16
17	2	R401 6' NOVELTY CASE		20 A	1					1.80	0.70	1	20 A		H004 THERMO DR/	AWER	5	18
19	2	RECS. PREP CONVENIENCE		20 A	1	0.36	0.48					1	20 A		R207 27" U.C. FRID)GE	5	20
21	0	LTG. LED CONTROL / REC.		20 A	1			0.54	1.49			2	20 A		H209 FLEXESERVE	= 1000	5	22
23	4	WATER / AIR FILL STATION		20 A	1					1.56	1.49	2	2070			- 1000	Ŭ	24
25		SPARE		20 A	1	0.00	1.49					2	20 A		H209 FLEXESERVE	= 1000	5	26
27		FILLER SPACE			1				1.49			2						28
29		FILLER SPACE			1						1.42	1	20 A		H206 PIZZA WARM		5	30
31		FILLER SPACE			1		0.18					1	20 A		REC. CONVENIEN		2	32
33		FILLER SPACE			1				0.18			1	20 A		RECS. CONVENIER		2	34
35		FILLER SPACE			1						0.72	1	20 A		M104 LOTTO RECE		3	36
37		FILLER SPACE			1		1.00					1	20 A		RECIRC. PUMP / A	QUASIAI	4	38
39		FILLER SPACE			1							1			FILLER SPACE			40
41		FILLER SPACE			1							1			FILLER SPACE			42
		and Loads May Vary From Connected s Because of Demand Factors	Total C	Connec Total	t Load: Amps:		.83) A	11. 96	.45 6 A	11 94		kVA Amps			Circuit Numberi	ng By Pole Positio	n Circuit	
Loa		es Load Classification		Connect	ed Loa	4	Dem	and Fa	ctor	Fst	imated	d Demai	nd		Panel	Totals		
	0	Lighting - Non-Continuous		0.		-		25.00%			0.0							
	1	Lighting - Continuous		0.0	-			0.00%	,		0.0				Total Conn. Load:	33.50		
	2	Receptacles		19	.58		7	5.53%			14.	.79		•	Total Est. Demand:	25.31		
	3	Special Loads		0.	72		1	00.00%)		0.	72			Total Conn.:	93 A		
	4	Motors		2.	56		1	00.00%)		2.	56			Total Est. Demand:	70 A		
	5	Kitchen (Commercial)		10.				5.00%			6.	57						
	6	Heating		0.	00			0.00%			0.	00						
	7	Cooling		0.				0.00%				00						
	9	Computer Outlets		0.	00			0.00%			0.	00			Spare Capacity:	155 A		
	10	Exterior Lighting		0.				0.00%			0.			Spare	e Capacity Percent:	31		
	11	Miscellaneous - Continuous		0.	00			0.00%			0.	00						
	12	Modular Furniture Outlets		0.0	00			0.00%			0.0	00						

				Bus	Rating:	225 A	١			Main R	ating l	Jpstrea	m: 225	A		Location:	IST. D	Р	
PA	NEL	BOARD		v	oltage:	208Y/	/120 V				Ма	ains Typ	De: M.L	.0.	Busb	ar Material: C	U		
Е				s	system:	3Ø, 4	W				A.I.	C. Ratir	ng: 65,0	A 000	Grou	Ind Busbar: Y	es		
╞┺━					unting:	-						y / Serie	•		Neut	ral Busbar: 1	00%		
Statu	s: Ne	N .			•		In-Doo	r		Branc		ker Typ		,		Ind Busbar: N			
Statu	5. Ne	v		Nama			-111-000	1		Dianc									
			_		Rating:							eed Typ				Skirt Type: N	lone		
Furn	shed	by Owner, installed by EC	Fe	ed Thru	u Lugs:	No					Tern	ninatior	is: 75°		1	Sections: 1			
	Load Code	Load Description	Notes	Brkr Size	Poles		A		B		<u> </u>	Poles	Brkr Size	Notes	Load De	scription		Load Code	
1		FILLER SPACE			1		1.89												2
3		FILLER SPACE			1				1.89			3	25 A		B201 ICE MACHINE	E CONDENSE	R	4	4
5		FILLER SPACE			1						1.89								6
7						3.94	1.89	0.04	4.00										8
9	4	WALK-IN COOLER CONDENSER		50 A	3			3.94	1.89	2.04	4 00	3	25 A		B202 ICE MACHINE	E CONDENSE	R	4	10
11 13			-			3.87	2.51			3.94	1.89								12 14
15	4	WALK-IN FREEZER CONDENSER		40 A	3	3.07	2.51	3.87	2.51			3	30 A		R308 REF. ISLAND		,	4	14
17	4	WAEK-INTREEZER CONDENSER		40 A	5			5.07	2.51	3.87	2.51	5	50 7			CONDENSE	`	4	18
19						2.77				0.07	2.01	1			FILLER SPACE				20
21	4	COLD VAULT CONDENSER		45 A	3	2.77		2.77				1			FILLER SPACE				22
23										2.77		1			FILLER SPACE				24
25		FILLER SPACE			1							1			FILLER SPACE				26
27		FILLER SPACE			1							1			FILLER SPACE				28
29		FILLER SPACE			1							1			FILLER SPACE				30
31		SPARE		20 A	1	0.00						1			FILLER SPACE				32
33		SPARE		20 A	1			0.00				1			FILLER SPACE				34
35		SPARE		20 A	1					0.00		1			FILLER SPACE				36
37		SPARE		20 A	1	0.00						1			FILLER SPACE				38
39	2	REC. ATM		20 A	1			0.24				1			FILLER SPACE				40
41	2	REC. BITCOIN ATM		20 A	1					0.24		1			FILLER SPACE				42
			Total C	Connec	t Load:	16	5.87	17	.11	17	.11	kVA							
		nd Loads May Vary From Connected Because of Demand Factors		Total	Amps:	14	1 A	14	3 A	14	3 A	Amps			Circuit Number	ing By Pole Po	sition C	Circuit	
Load	d Code	es Load Classification	C	connect	ed Loa	d	Dem	and Fa	ctor	Est	timated	d Dema	nd		Panel	Totals			
	0	Lighting - Non-Continuous		0.	00			0.00%			0.	00							
	1	Lighting - Continuous		0.	00			0.00%			0.	00			Total Conn. Load:	51.09			
	2	Receptacles		0.4	48		1	00.00%	, D		0.4	48			Total Est. Demand:	51.09			
	3	Special Loads		0.	00			0.00%			0.	00			Total Conn.:	142 A			
	4	Motors		50	.61		1	00.00%	, D		50	.61			Total Est. Demand:	142 A			
	5	Kitchen (Commercial)		0.	00			0.00%			0.	00							
	6	Heating		0.	00			0.00%			0.	00							
	7	Cooling		0.	00			0.00%			0.	00							
	9	Computer Outlets		0.	00			0.00%			0.	00			Spare Capacity:	83 A			
	10	Exterior Lighting		0.	00			0.00%				00		Spar	e Capacity Percent:	63			
	11	Miscellaneous - Continuous		0.	00			0.00%			0.	00							
	12	Modular Furniture Outlets		0.	00			0.00%			0.	00							

PANELBOARD **CIRCUIT NOTES**

- . TERMINATE GROUND ON ISOLATED GROUND BUS.
- 2. INSTALL LOCKING DEVICE ON BREAKER PER NEC (LOCK-OFF FOR MAINTENANCE).
- 3. INSTALL LOCKING DEVICE ON BREAKER PER NEC (LOCK-ON FOR CRITICAL LOAD).
- 4. GFI BREAKER FOR PERSONNEL PROTECTION (5MA).
- . REFER TO ONE-LINE DIAGRAM FOR CONDUCTOR
- PROVIDE LOCK-OFF DEVICE TO SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS PER NEC.
- . FIRE ALARM CIRCUIT. PROVIDE RED MARKING AND LABEL "FIRE ALARM CIRCUIT CONTROL" ON BREAKER.
- B. OPTIONAL EQUIPMENT: REVISE TO SPACE FILLER IF NOT USED ON SITE.
- 9. FACTORY INSTALLED WIRING IN UNITIZED

SIZES.

SWITCHGEAR.

Status: New Furnished by Owner, installed by EC CCT Load No. Code Load Description
 1
 4
 SUBMRG. 2HP PUMP REGULA

 5
 5

 3
 4
 SUBMRG. 2HP PUMP REGULA
 9 11 4 SUBMRG. 2HP PUMP CK CHO 13 -- FILLER SPACE -- FILLER SPACE 17 -- FILLER SPACE 19 -- FILLER SPACE - FILLER SPACE - FILLER SPACE FILLER SPACE - FILLER SPACE - FILLER SPACE - FILLER SPACE -- FILLER SPACE · FILLER SPACE · FILLER SPACE 39 -- FILLER SPACE 41 -- FILLER SPACE 43 2 E-STOP CONTROL PWR 45 -- SWITCHED NEUTRAL 47 2 SPARE ELECTRONICS 49 2 VEEDER ROOT (E1) 51 2 INTERCOM CONTROLLER (E2 53 2 DISTRIBUTION BOX (E3) Demand Loads May Vary From Conne Loads Because of Demand Factors Load Codes Load Classification 0 Lighting - Non-Continuous 1 Lighting - Continuous 2 Receptacles 3Special Loads4Motors 5 Kitchen (Commercial) 6 Heating 7 Cooling 9 Computer Outlets 10 Exterior Lighting 11 Miscellaneous - Continuous 12 Modular Furniture Outlets

PANELBOARD

		Bus I	Rating:	125 A			I	Main R	ating l	Jpstrea	m: 125	δA		Location: DIST. [OP	
		v	oltage:	208Y/	120 V				Ма	ains Typ	De: M.L	0.	Busb	ar Material: CU		
		s	system:	3Ø, 4	N				A.I.	C. Ratir	ng: 65,	000 A	Grou	nd Busbar: Yes		
			unting:							v / Serie	-		Neut	ral Busbar: 100%		
			-		er In-Door	-		Branc		ker Typ				nd Busbar: No		
		Name			1000			Branc								
			Rating:							eed Typ				Skirt Type: None		
	Fe	ed Thru	Lugs:	No					Tern	ninatior	15: 75°	C CU	1	Sections: 1		
		Brkr									Brkr				Load	cc.
	Notes	Size	Poles	1.38	A 1.38	E	3	(Poles	Size	Notes	Load Des	scription	Code	No
LAR		20 A	2	1.30	1.30	1.38	1.38			2	20 A		SUBMRG. 2HP PUI	MP SUL	4	2
						1.50	1.50	1.38	1.38							- 6
LAR		20 A	2	1.38	1.38			1.50	1.50	2	20 A		SUBMRG. 2HP PUI	MP DIESEL	4	8
				1.00	1.00	1.38				1			FILLER SPACE			10
IOICE		20 A	2			1.00		1.38		1			FILLER SPACE			12
			1							1			FILLER SPACE			14
			1							1			FILLER SPACE			16
			1							1			FILLER SPACE			18
			1							1			FILLER SPACE			20
			1				0.26			1	20 A		MISC DISPENSE	R #1	3	22
			1							1			SWITCHED NEUTF			24
			1		0.26					1	20 A		MISC DISPENSE		3	26
			1							1			SWITCHED NEUTF			28
			1						0.26	1	20 A		MISC DISPENSE		3	30
			1							1			SWITCHED NEUTF	RAL		32
			1				0.26			1	20 A		MISC DISPENSE	R #4	3	34
			1							1			SWITCHED NEUTF	RAL		36
			1		0.26					1	20 A		MISC. DISPENSER	#5	3	38
			1							1			SWITCHED NEUTF	RAL		40
			1						0.26	1	20 A		MISC DISPENSE	R #6	3	42
	9	15 A	1	0.18						1			SWITCHED NEUTF	RAL		44
			1				0.26			1	20 A		MISC DISPENSE	R #7	3	46
		20 A	1					0.36		1			SWITCHED NEUTF	RAL		48
		20 A	1	0.36	0.01											50
2)		20 A	1			0.36	0.01			3	30 A	9	SPD		11	52
		20 A	1					0.36	0.01							54
	Total C	onnect	t Load:	6.	57	5.3	28	5.	38	kVA						
nected		Total	Amps:	55	δA	44	A	45	δA	Amps			Circuit Numberi	ng By Pole Position	Circuit	
	С	onnect	ed Loa	d	Dema	and Fa	ctor	Est	imated	d Dema	nd		Panel	Totals		
		0.0	00			0.00%			0.0	00						
		0.0	00			0.00%			0.0	00			Total Conn. Load:	17.22		
		1.6	62		1	00.00%)		1.0	62			Total Est. Demand:	17.23		
		1.8	32		1	00.00%)		1.8	82			Total Conn.:	48 A		
		13.	75		1	00.00%)		13	.75			Total Est. Demand:	48 A		
		0.0				0.00%				00						
		0.0	00			0.00%			0.	00						
		0.0				0.00%				00						
		0.0				0.00%				00			Spare Capacity:			
		0.0				0.00%		_		00		Spare	Capacity Percent:	38		
S		0.0				25.00%)			04						
		0.0	00			0.00%			0.	00						

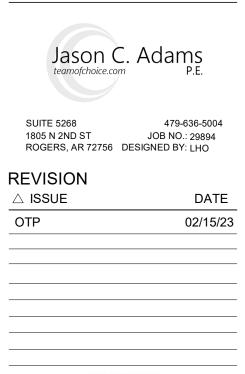


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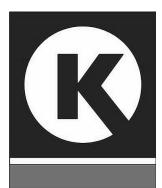
JCA PROJECT SAG QUALITY SAG DRAWN LHO

PROJECT

CIRCLE K STORES, INC.

ANGIER, NC

9706 KENNEBEC CHURCH ROAD, ANGIER, NC PROTOCYCLE# R1.2 12/XX/22



CIRCLE K STORE PROJECT NUMBER: 22130

> PANEL SCHEDULES

E7.0

		BOARD	B	sus Ratii	•
PA		DUARD		Volta	ge: 12
U				Syste	em: 10
				Mounti	ng: Ca
Statu	s: New			Tri	im: Do
			Ne	ma Rati	ng: 3R
Furni	shed b	y Owner, installed by EC	Feed	Thru Lug	gs: No
CCT No.	Load Code	Load Description	Notes	Brkr Size	Poles
1	2	SELF CHECK POS SYSTEM		20 A	1
3	2	SELF CHECK POS SYSTEM		20 A	1
5	2	REC. SECONDARY COMMUNICATION		20 A	1
7	2	REC. DATA COMMUNICATIONS		20 A	1
9		FILLER SPACE			1
11		FILLER SPACE			1
13		FILLER SPACE			1
15 17		FILLER SPACE			1
11					
	1		Total	Connec	t I oac
	Loads	nd Loads May Vary From Connected Because of Demand Factors	1		I Amps
Load	Loads I Codes	nd Loads May Vary From Connected Because of Demand Factors	1	Tota nected L	I Amps
Load	Loads	nd Loads May Vary From Connected Because of Demand Factors Load Classification Lighting - Non-Continuous	1	Tota	I Amps
Load	Loads I Codes	nd Loads May Vary From Connected Because of Demand Factors	1	Tota nected L	I Amps
Load	Loads I Codes 0	nd Loads May Vary From Connected Because of Demand Factors Load Classification Lighting - Non-Continuous	1	Tota nected L 0.00	I Amps
Loac	Loads I Codes 0 1	nd Loads May Vary From Connected Because of Demand Factors Load Classification Lighting - Non-Continuous Lighting - Continuous	1	Tota nected L 0.00 0.00	I Amps
Loac	Loads I Codes 0 1 2	ad Loads May Vary From Connected Because of Demand Factors Load Classification Lighting - Non-Continuous Lighting - Continuous Receptacles	1	Tota nected L 0.00 0.00 6.06	I Amps
Load	Loads I Codes 0 1 2 3	nd Loads May Vary From Connected Because of Demand Factors Load Classification Lighting - Non-Continuous Lighting - Continuous Receptacles Special Loads	1	Tota nected L 0.00 0.00 6.06 0.00	I Amps
Loac	Loads I Codes 0 1 2 3 4	nd Loads May Vary From Connected Because of Demand Factors Load Classification Lighting - Non-Continuous Lighting - Continuous Receptacles Special Loads Motors	1	Tota nected L 0.00 0.00 6.06 0.00 0.00	I Amps
Loac	Loads 1 Codes 0 1 2 3 4 5	Ad Loads May Vary From Connected Because of Demand Factors Load Classification Lighting - Non-Continuous Lighting - Continuous Receptacles Special Loads Motors Kitchen (Commercial)	1	Tota nected L 0.00 0.00 6.06 0.00 0.00 0.00	I Amps
Loac	Loads I Codes 0 1 2 3 4 5 6	d Loads May Vary From Connected Because of Demand Factors Load Classification Lighting - Non-Continuous Lighting - Continuous Receptacles Special Loads Motors Kitchen (Commercial) Heating	1	Tota nected L 0.00 6.06 0.00 0.00 0.00 0.00	I Amps
	Loads I Codes 0 1 2 3 4 5 6 7	nd Loads May Vary From Connected Because of Demand Factors Load Classification Lighting - Non-Continuous Lighting - Continuous Receptacles Special Loads Motors Kitchen (Commercial) Heating Cooling	1	Tota nected L 0.00 6.06 0.00 0.00 0.00 0.00 0.00 0.00	I Amps
	Loads 1 Codes 0 1 2 3 4 5 6 7 9	 Ind Loads May Vary From Connected Because of Demand Factors Load Classification Lighting - Non-Continuous Lighting - Continuous Receptacles Special Loads Motors Kitchen (Commercial) Heating Cooling Computer Outlets 	1	Tota nected L 0.00 0.00 6.06 0.00 0.00 0.00 0.00 0.00 0.00 0.00	I Amps

20A WIRE SIZING SCHEDULE

ALL WIRE SIZES SHOWN ON PANEL SCHEDULES ARE INTENDED TO BE MINIMUM ACCEPTABLE WIRE SIZE.

THE FOLLOWING SCHEDULE IS TO BE USED TO SIZE WIRE FOR 20 AMP CIRCUITS (120 AND 277 VOLT).

LENGTHS (IN FEET) ARE INTENDED TO BE MAXIMUM.					
120 VOLT	#12	#10	#8	#6	
1-5 AMPS	200 FT.	325 FT.	490 FT.	770 FT.	
6-10 AMPS	100 FT.	160 FT.	245 FT.	385 FT.	
11-15 AMPS	70 FT.	110 FT.	165 FT.	255 FT.	
277 VOLT	#12	#10	#8	#6	
1-5 AMPS	480 FT.	760 FT.	1170 FT.	1865 FT.	
6-10 AMPS	240 FT.	380 FT.	585 FT.	930 FT.	
11-15 AMPS	160 FT.	250 FT.	390 FT.	620 FT.	

GROUND WIRE SIZING CHART

BRKR AMPS			W	IRE SIZE	<u>.</u>	
	PHASE	12	10	8	6	4
15-20	GROUND	12	10	8	6	4
	PHASE	10	8	6	4	3
25-30	GROUND	10	8	6	4	3
	PHASE	8	6	4	3	2
35-50	GROUND	10	8	4	4	4
	PHASE	6	4	3	2	1
60	GROUND	10	6	6	4	4
	PHASE	6	4	3	2	1
70	GROUND	8	4	4	3	2
	PHASE	4	3	2	1	1/0
80-90	GROUND	8	6	4	4	3
100	PHASE	3	2	1	1/0	2/0
100	GROUND	8	6	4	4	3
PER NE	EC 250.122(B)				

CIRCUIT BREAKERS SHALL BE A BOLT-ON TYPE, U.L. LISTED SERIES-RATED COMBINATION FROM PUBLISHED COMBINATION LISTINGS.

ir	ig: 100	A		N	lain Ra	ting Ups	tream:	40A		Location:	DIST. DP			
10	;e: 120/	240 V				Mains	Type:	M.C.B.	Busb	ar Material:	CU			
e	m: 1Ø,	3W					•••	10,000 A	Grou	nd Busbar: `	Yes			
	ng: Cab					Fully / S	U	,	Neutral Busbar: 100%					
	m: Doo		or		Branch	Breaker				nd Busbar:				
	ng: 3R		21		Dianon		•••	Bottom		Skirt Type:				
	is: No						Sections:							
	jo. 140							10000		000010110.	·			
	Poles		4	B Poles Size		Notes	Load Desc	Load Code						
	1	1.32	0.18			1	20 A		REC. CCTV SERVICE		2	2		
	1			1.32	1.20	1	20 A		REC. BACK OFFICE C	OMPUTER	2	4		
	1	0.36	0.96			1	20 A		T101 SAFE REC		2	6		
	1			0.36	0.36	1	20 A		RECS. LOTTO EQ 44		2	8		
	1					1			FILLER SPACE			10		
	1					1			FILLER SPACE			12		
	1					1			FILLER SPACE			14		
_	1					1			FILLER SPACE			16		
_	1			0		1			FILLER SPACE			18		
	t Load: Amps:		82		24	kVA Amno			Cine vit Nu web e viv					
11	Amps:	24	I A	21	' A	Amps			Circuit Numberir	IG BY Pole Po	sition Circuit			
L	oad	Dem	nand Fa	ctor	Estir	nated De	emand		Panel	Totals				
			0.00%			0.00								
			0.00%			0.00			Total Conn. Load:					
			100.00%)		6.06			Total Est. Demand:	6.06				
			0.00%			0.00			Total Conn.:	25 A				
			0.00%			0.00			Total Est. Demand:	25 A				
			0.00%			0.00								
			0.00%			0.00								
			0.00%											
	0.00% 0.00													
		0.00% 0.00												
			0.00% 0.00											
	0.00% 0.00													
	0.00% 0.00													

				Bus Rating:	Bus Rating: 800 A Main Rating Upstream: 800A								Location: DIST. DP		
SWI	TCHB	BOAR	D	Voltage:	208Y/12	20 V			Main	Type: M.I	0.	Bus	bar Material: CU		
DP				System:	3Ø, 4W Aic Rating: 65,000						000 A	00 A Ground Busbar: Yes			
				Mounting:	Cabinet				Fully/S	Series: Ful	ly	Ne	utral Busbar: 100%		
Status:	New			Trim:	Door-In-	Door		Branc	ch Breaker	Type: Bol	t-On	IG Gro	ound Busbar: No		
				Nema Rating:	3R Feed Ty					Type: Bot	tom		Skirt Type: None		
urnis	hed by O	wner, in	stalled by EC	Feed Thru Lugs:	No				Termina	ations: 75°	C CU		Sections: 4		
сст								Brkr		А	В	с			
No.	Load C			ad Description			Notes	Size	Poles			+ +	Remarks		
1	2; 4; 10	0; 1; 3	PANEL A				9	225 A	-	13.80	18.46	16.86			
2	2; 4; 5	5; 1; 3	PANEL B				9	225 A	-	6.27	5.69	8.17			
3	2; 4; 5	5; 0; 3	PANEL C				9	225 A	-	10.83	11.45	11.22			
4	2; 4	l; 5	PANEL D			9	225 A	3	10.51	11.23	11.14				
5	2;	4	PANEL E			9	225 A	3	16.87	17.11	17.11				
6	2; 4; 3	3; 11	PANEL G			9	125 A	3	6.57	5.28	5.38				
7	4	Ļ	RTU 1				30 A	3	3.48	3.48	3.48				
8	4	Ļ	RTU 2				45 A	3	4.68	4.68	4.68				
9		-	FILLER SPACE						3						
10	1	1	SPD				9	30 A	3	0.01	0.01	0.01			
_									_	73.03	77.38		kVA		
			From Connected Loads Be e Position	ecause of Demand Fa	actors					609 A	650 A	656 A	Amps		
Load	Codes	Load C	assification	Connected L	oad	Dema	mand Factor		or Estimated D			Panel	Totals		
	0	Lighting	- Non-Continuous	0.54		12	5.00%		0.68						
	1	Lighting	- Continuous	5.61		12	5.00%		7.01		Tota	I Conn. Load:	228.45		
	2	Recepta	cles	40.12		62	2.46%		25.06	6	Total	Est. Demand:	206.15		
	3	Special	Loads	38.28		10	0.00%		38.28	3	Total C	onn. Current:	634 A		
	4	Motors		98.99		10	0.00%		98.99	9	Total Est. Den	nand Current:	572 A		
	5	Kitchen	(Commercial)	33.34		65	5.00%		21.67	7					
	6	Heating		0.00	0.00 0				0.00						
	7	Cooling 0.00				0	.00%		0.00						
	9	Computer Outlets 0.00				0	.00%		0.00		Sp	are Capacity:	228 A		
	10	Exterior	Lighting	ng 11.52 1			5.00%		14.40	2 C	Spare Cap	re Capacity Percent: 72			
	10		liscellaneous - Continuous 0.06				25.00% 0.08								
	11	Miscella	neous - Continuous	0.06		12	5.00%		0.08						

FAULT CURRENT CALCULATIONS

	THE FOLLOWING CALCU	ILATIONS ARE BASED OF	N THE "POINT-BY-POINT" METHOD WHERE:	
	$Isc = Isc \times M$	M = 1/(1+f)	f = <u>1.73 x L x I</u>	XF
I			CvEvn	

	$Isc = Isc \times M$		= 1/(1+f)		$f = \frac{1.73 \text{ x L x I}}{\text{C x E x n}}$		XFMR: []]	[P(sca)= <u>IP(sea</u>	<u>ca)x Vp x%</u> 0,000 x K\	-	sca)= <u>Vp :</u>	<u>x M x IS</u> Vs	<u>(sca)</u>
(ALL C	ALCULATIONS UT	ILIZE COP	PER CONDU	CTORS)				10	J,000 X KV	/A		VS	
Fault Point	Panel / Transformer	Source (Fault Point)	Source I (amps)	Conduit Type	Wire/Bus Size	'C' value	E (volts)	L (length)	X'FMR KVA	X'FMR Z	f	M	Isc
F1	SERVICE DISC		65,000										65,000
F2	DIST. DP	1	55,476	М	4 Set(s) of 3/0	12,844	208	25			0.032	0.76	53,089
F3	PANEL 'A'	2	53,089	М	1 Set(s) of 4/0	15,082	208	5			0.082	0.92	46,303
F4	PANEL 'B'	2	53,089	М	1 Set(s) of 4/0	15,082	208	5			0.136	0.88	46,303
F5	PANEL 'C'	2	53,089	М	1 Set(s) of 4/0	15,082	208	5			0.082	0.92	46,303
F6	PANEL 'D'	2	53,089	М	1 Set(s) of 4/0	15,082	208	5			0.082	0.92	46,303
F7	PANEL 'E'	2	53,089	М	1 Set(s) of 4/0	15,082	208	5			0.082	0.92	46,303
F8	PANEL 'G'	2	53,089	М	1 Set(s) of 1	7,293	208	5			0.169	0.86	46,303
F9	LTG. CONTACT	3	46,303	М	1 Set(s) of 12	617	208	5			4.929	0.17	11,226
F10	PANEL 'U'	6	46,303	М	1 Set(s) of 10	981	208	5			1.163	0.46	20,688
F11	SERVICE DISC		65,000										65,000
F12	PANEL 'CWA'	11	55,476	М	2 Set(s) of 4/0	12,844	208	250			6.321	0.14	11,489

GENERAL PANELBOARD NOTES

CIRCUIT BREAKERS IN PANELBOARDS SHALL BE U.L. LISTED SERIES RATED WITH SPECIFIED 65K AIC UPSTREAM CIRCUIT BREAKER AND DOWNSTREAM 10K AMP RATED BRANCH CIRCUIT BREAKERS.

PROVIDE A PERMANENT LABEL READING "CAUTION -SERIES RATED SYSTEM 65K, "X" AMPS AVAILABLE." IDENTIFIED (LABELED) REPLACEMENT COMPONENTS REQUIRED. (REFER TO SHORT CIRCUIT CALCULATIONS FOR ACTUAL AMPS TO BE LABELED).

PANELBOARD **CIRCUIT NOTES**

- 1. TERMINATE GROUND ON ISOLATED GROUND BUS.
- 2. INSTALL LOCKING DEVICE ON BREAKER PER NEC (LOCK-OFF FOR MAINTENANCE).
- INSTALL LOCKING DEVICE ON BREAKER PER NEC (LOCK-ON FOR CRITICAL LOAD).
- 4. GFI BREAKER FOR PERSONNEL PROTECTION (5MA). 5. REFER TO ONE-LINE DIAGRAM FOR CONDUCTOR SIZES.
- 6. PROVIDE LOCK-OFF DEVICE TO SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS PER NEC.
- 7. FIRE ALARM CIRCUIT. PROVIDE RED MARKING AND LABEL "FIRE ALARM CIRCUIT CONTROL" ON BREAKER.
- OPTIONAL EQUIPMENT: REVISE TO SPACE FILLER IF NOT USED ON SITE.
- 9. FACTORY INSTALLED WIRING IN UNITIZED SWITCHGEAR.

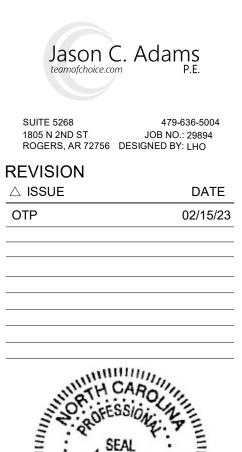


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PROJECT

CIRCLE K STORES, INC.

ANGIER, NC

9706 KENNEBEC CHURCH ROAD, ANGIER, NC PROTOCYCLE# R1.2 12/XX/22



CIRCLE K STORE PROJECT NUMBER: 22130

> PANEL SCHEDULES

E7.1

SECTION 16010 - BASIC ELECTRICAL REQUIREMENTS

- A. THE WORK OF EACH OF THE ELECTRICAL SECTIONS INCLUDES FURNISHING AND INSTALLING THE MATERIAL, EQUIPMENT. AND SYSTEMS COMPLETE AS SPECIFIED AND/OR INDICATED ON THE DRAWINGS. THE ELECTRICAL INSTALLATIONS, WHEN FINISHED, SHALL BE COMPLETE AND COORDINATED, READY FOR SATISFACTORY SERVICE.
- B. THE WORK UNDER THIS CONTRACT SHALL BE DONE IN STRICT ACCORDANCE WITH ALL APPLICABLE MUNICIPAL, STATE AND OTHER LOCAL CODES, THE 2020 EDITION OF THE NORTH CAROLINA ELECTRICAL CODE AND THE 2010 ADA STANDARDS.
- C. THE CONTRACTOR SHALL MAKE APPLICATION AND PAY FOR ALL PERMITS, LICENSES AND INSPECTIONS AS REQUIRED UNDER THE ABOVE CODES.
- D. THE GENERAL ARRANGEMENT OF CONDUIT, WIRING AND EQUIPMENT SHALL BE AS IDENTIFIED ON THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL CAREFULLY INVESTIGATE THE SITE, STRUCTURAL, AND FINISH CONDITIONS AFFECTING HIS WORK AND SHALL ARRANGE SUCH WORK ACCORDINGLY, PROVIDING SUCH FITTINGS AND ACCESSORIES AS MAY BE REQUIRED TO MEET SUCH CONDITIONS.
- THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND SERVICES NECESSARY FOR AND REASONABLY INCIDENTAL TO THE COMPLETE INSTALLATION OF THE ELECTRICAL WORK AND RELATED SYSTEMS AS INDICATED ON THE DRAWINGS OR AS NECESSARY TO PROVIDE A COMPLETE SYSTEM
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY WIRING, LIGHTING AND CONSTRUCTION POWER FOR ALL TRADES AS REQUIRED TO COMPLETE THE PROJECT.
- G. ALL MATERIALS AND EQUIPMENT SHALL BE INSTALLED AND COMPLETED IN A FIRST CLASS WORKMANLIKE MANNER. ALL MATERIALS SHALL BE NEW AND THE BEST OF THEIR RESPECTIVE KINDS. ALL EQUIPMENT AND SYSTEMS SHALL BE APPROVED BY UL OR SIMILAR NATIONALLY ACCEPTED TESTING AGENCY SUCH AS ETL TESTING LABORATORIES.
- THE CONTRACTOR SHALL VISIT THE SITE AND OBSERVE THE CONDITIONS UNDER WHICH THE WORK SHALL BE Н. COMPLETED. NO ALLOWANCE WILL BE MADE SUBSEQUENTLY IN THIS CONTRACT FOR ANY ERROR OR NEGLIGENCE IN THE CONTRACTOR'S PART.
- THE CONTRACTOR SHALL SUBMIT DETAILED DIMENSIONED SHOP DRAWINGS, TOGETHER WITH WIRING DIAGRAMS, SPECIFICATIONS, OPERATING DATA, AND/OR CATALOG CUTS FOR ALL EQUIPMENT.
- A THOROUGH TEST SHALL BE MADE PRIOR TO ENERGIZING THE SYSTEM TO DEMONSTRATE THAT THE SYSTEM IS ENTIRELY FREE FROM GROUND FAULTS, SHORT CIRCUITS, AND OPEN CIRCUITS; THAT THE RESISTANCE TO GROUND OF ALL NON-GROUNDED CIRCUITS, BEFORE AND AFTER CONNECTION OF EQUIPMENT MEETS THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE AND IEEE STANDARDS/RECOMMENDATIONS.
- IDENTIFY ALL MOTOR STARTERS, SWITCHES, CONTROLS, PANELBOARDS, SWITCHBOARDS, TERMINAL BOARDS, CONTROL CENTERS AND OTHER EQUIPMENT. IDENTIFICATION PLATES SHALL BE LAMINATED PLASTIC, BLACK AND WHITE ENGRAVED LETTERS. LETTERING FOR CONTROL CENTERS, CONTROL PANELS, METERING AND INSTRUMENT PANELS SHALL BE 3/8" HIGH
- THE MATERIAL AND WORKMANSHIP OF ALL PARTS OF THE ELECTRICAL INSTALLATION SPECIFIED HEREIN SHALL BE L. GUARANTEED UNCONDITIONALLY FOR A PERIOD OF ONE (1) YEAR FROM DATE OF FINAL CERTIFICATE OF OCCUPANCY OR GRAND OPENING, WHICH EVER COMES FIRST.
- M. UPON COMPLETION OF THE ELECTRICAL INSTALLATION, THE CONTRACTOR SHALL DELIVER TO THE OWNER ONE SET OF SCANNED DIGITAL PRINTS OF ELECTRICAL CONTRACT DRAWINGS WHICH SHALL BE LEGIBLY MARKED IN RED TO SHOW ALL ADDITIONS, CHANGES AND DEPARTURES OF THE INSTALLATION AS COMPARED WITH THE ORIGINAL DESIGN. THEY SHALL BE SUITABLE FOR USE IN PREPARATION OF RECORD DRAWINGS.
- N. THE CONTRACTOR SHALL PREPARE A RECORD AND INFORMATION MANUAL. THE MANUAL SHALL BE SCANNED INTO A DIGITAL FORMAT AND FORWARDED TO CIRCLE K CONSTRUCTION. PROVIDE THE FOLLOWING DATA IN THE RECORD AND INFORMATION MANUAL:
 - CUT SHEETS OF ALL EQUIPMENT WITH TECHNICAL SPECIFICATIONS.
 - OPERATION AND MAINTENANCE PROCEDURES. SERVICING INSTRUCTIONS
 - COPIES OF PANELBOARD DIRECTORIES.
 - COPIES OF WARRANTIES. LIST OF LAMPS SHOWING QUANTITY, TYPE, WATTAGE, MANUFACTURER, CATALOG NUMBER, ETC., FOR EACH FIXTURE TYPE.
 - COPIES OF TEST REPORTS.
- EXACT LOCATIONS OF OUTLETS SHALL BE COORDINATED WITH DOOR SWINGS AND VARIOUS PROTRUSIONS. MOUNTING 0 HEIGHTS OF THE VARIOUS ELECTRICAL DEVICES SHALL BE AS FOLLOWS:
- SWITCHES 46" AFF TO CENTER OF BOX 20" AFF TO CENTER OF BOX RECEPTACLES TELEPHONE OUTLETS 20" AFF TO CENTER OF BOX EXIT LIGHTS CENTERED BETWEEN CEILING AND TOP OF DOOR (UP TO 1'-0" ABOVE DOOR), SURFACE OR CEILING MOUNTED AS SHOWN DISCONNECTING SWITCHES 52" AFF TO CENTER OF SWITCH
- P. PROVIDE A DISCONNECT SWITCH FOR EACH MOTOR AS SHOWN ON THE DRAWINGS SIZED AS REQUIRED TO MEET THE NEC AND PROVIDE ALL WIRING CONNECTIONS FROM SOURCE. PROVIDE REQUIRED VOLTAGE.
- Q. SEAL ALL CONDUIT PENETRATIONS THRU RATED WALLS AND FLOORS TO MAINTAIN FIRE INTEGRITY. REFER TO ARCHITECTURAL DRAWING FOR FIRE WALL LOCATIONS.
- R. ELECTRICAL CONTRACTOR SHALL VERIFY ALL VOLTAGES OF MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
- SECTION 16050 BASIC ELECTRICAL MATERIALS AND METHODS
- INSTALL ALL WIRING CONDUIT EXCEPT AS OTHERWISE INDICATED. MINIMUM CONDUIT SIZE SHALL BE 3/4". ALL CONDUIT Α. EMBEDDED IN CONCRETE SHALL BE 3/4" MINIMUM. INSTALL ALL CONDUIT CONCEALED UNLESS ON UNFINISHED WALLS, ON UNFURRED CEILINGS OR MECHANICAL EQUIPMENT SPACES. PROVIDE CONDUIT AS FOLLOWS:
 - RIGID STEEL CONDUIT FOR WORK EXPOSED TO WEATHER OR EMBEDDED IN CONCRETE OR MASONRY. GALVANIZED ELECTRICAL METALLIC TUBING (EMT) FOR INTERIOR EXPOSED WORK, CONCEALED WORK ABOVE SUSPENDED CEILINGS, AND WITHIN INTERIOR PARTITIONS OR NON-MASONRY WALLS.
 - FLEXIBLE METAL CONDUIT IN SHORT LENGTHS (6' MAXIMUM) FOR THE CONNECTION OF RECESSED
 - LIGHTING FIXTURES AND MOTORS. LIQUID TIGHT FLEXIBLE METAL CONDUIT WHEREVER MOISTURE MAY BE PRESENT AND MOTORS IN MECHANICAL EQUIPMENT SPACES.
 - POLYVINYLCHLORIDE (PVC) SCHEDULE 40 AND 80 CONDUIT WITH GROUND CONDUCTOR FOR UNDERGROUND OUTSIDE OF BUILDING (SITE) INSTALLATION AS PERMITTED BY 2008 NEC ARTICLE 352
- B. INSTALL CONDUITS PARALLEL AND PERPENDICULAR TO WALLS AND INTERIOR SURFACES. CLEAN AND PLUG AND PROVIDE A PULL LINE IN EACH CONDUIT LEFT EMPTY. USE MANUFACTURED ELBOWS AND SCREW JOINTED CONDUIT FITTINGS. USE CAPPED BUSHINGS OR "PUSH PENNY" PLUGS. ALL FITTINGS SHALL BE STEEL OR MALLEABLE IRON. ALL EMT FITTINGS SHALL BE COMPRESSION TYPE.
- C. ALL OUTLET, SWITCH AND JUNCTION BOXES, SHALL BE STAINLESS STEEL BY STEEL CITY, RACO, APPLETON, VALEN, OR EQUIVALENT. OUTLET BOXES IN CONCRETE CONSTRUCTION SHALL BE OCTAGONAL. NO "THRU-WALL" BOXES SHALL BE USED IN PARTITIONS. ALL BOXES SHALL BE FURNISHED WITH APPROPRIATE COVERS.
- JUNCTION AND PULL BOXES SHALL BE FURNISHED AND INSTALLED AS INDICATED OR WHERE REQUIRED TO FACILITATE D. PULLING OF WIRES OR CABLES. BOXES FOR EXTERIOR WORK SHALL BE CAST ALUMINUM OR GALVANIZED CAST IRON TYPE WITH THREADED HUBS, UNLESS OTHERWISE DIRECTED. GASKETED COVER PLATES SHALL BE FURNISHED FOR OUTDOOR INSTALLATIONS.
- BUILDING WIRE, UNLESS OTHERWISE INDICATED, SHALL BE COPPER, 600 VOLT, TYPE THWN/THHN INSULATION, #12 AWG MINIMUM, FOR INTERIOR AND EXTERIOR USE. FOR BRANCH CIRCUITS TYPE MC (METAL CLAD) CABLE MAY BE USED WHERE PERMITTED BY THE NEC AND LOCAL CODES. NO ROMEX OR AC (BX) CABLE WILL BE ALLOWED ON THE PROJECT.
- MINIMUM WIRE SIZE SHALL BE NUMBER TWELVE (12) AWG. NO SPLICES SHALL BE MADE EXCEPT WITHIN OUTLET OR F JUNCTION BOXES. WIRES NUMBER EIGHT (8) AWG AND LARGER SHALL BE STRANDED. WIRES AND CABLES SHALL BE MANUFACTURED BY PIRELLI, ROYAL, TRIANGLE OR EQUIVALENT.

G.	THE COLOR COD	ING SYSTEM LIST	ED BELOW SHA	LL BE USED THR	OUGHOUT THE	E BUILDING:	
	<u>SYSTEM</u>	PHASE A	PHASE B	PHASE C	<u>NEUTRAL</u>	<u>GROUND</u>	ISOLATED GROUND
	120/208V	BLACK	RED	BLUE	WHITE	GREEN	GREEN/YELLOW
	277/480V	BROWN	ORANGE	YELLOW	GRAY	GREEN	GREEN/YELLOW

- H. THE WIRE SIZE INDICATED IN THE HOMERUN SHALL BE USED THROUGH THE CIRCUIT. PROVIDE DISCONNECT SWITCHES WHERE INDICATED AND AS REQUIRED. SWITCHES SHALL BE OF SIZE, NUMBER OF POLES AND FUSED OR NONFUSED, AS REQUIRED FOR JOB CONDITIONS AND THE NATIONAL ELECTRICAL CODE. ALL SAFETY SWITCHES SHALL BE NEMA I ENCLOSURE "HD" WITH INTERLOCKING COVER AND HANDLE, MANUFACTURED BY SQUARE "D" OR APPROVED EQUAL. PROVIDE NEMA 3R ENCLOSURES WHERE REQUIRED.
- PROVIDE STARTERS AND CONTROL WIRING AS INDICATED ON THE DRAWINGS, OR SPECIFIED HEREIN. ALL TEMPERATURE CONTROL WIRING AND COMPONENTS SHALL BE UNDER DIVISION 15.
- PROVIDE THERMAL MANUAL MOTOR STARTING SWITCHES FOR FRACTIONAL HORSEPOWER, SINGLE PHASE MOTORS. THE STARTERS SHALL BE SQUARE D COMPANY, CLASS 2510, ALLEN BRADLEY BULLETIN 600, OR APPROVED EQUAL FOR SINGLE SPEED MOTORS. ENCLOSURES SHALL BE NEMA I FOR INTERIOR USE AND NEMA 3R FOR EXTERIOR USE.
- THREE PHASE MOTOR STARTERS SHALL BE 3 POLE, FULL-VOLTAGE, MAGNETIC TYPE. ENCLOSURES SHALL BE NEMA I FOR INTERIOR USE AND NEMA 3R FOR EXTERIOR USE, PROVIDE HOA SWITCH WHEN AUTOMATICALLY CONTROLLED, PILOT INDICATING LIGHT, CONTROL TRANSFORMER, AND NO/NC AUXILIARY CONTACTS. STARTERS SHALL BE SQUARE D COMPANY, CLASS 8536 AND CLASS 8538 COMBINATION TYPE OR APPROVED EQUAL.

- HAVING CORROSION-RESISTANT FINISH.
- - THE NEC TABLE 250.112.
 - SURFACES AS REQUIRED.
- SECTION 16400 SERVICE AND DISTRIBUTION
- в
- D. BUS BARS.

- SECTION 16500 LIGHTING 4.
- SHALL BE LEXAN TYPE MR-4000, OR EQUAL.
- D. AVAILABLE.
- RECESSED FIXTURES.
- CIRCUIT SERVING RESPECTIVE AREA.
- 5. SECTION 16700 - COMMUNICATION SYSTEMS

M. WIRING DEVICES SHALL BE ARROW HART, GENERAL ELECTRIC, P & S LEVITON OR HUBBELL: 1) WALL SWITCHES: ARROW HART 1991. THREE AND FOUR-WAY SWITCHES SHALL BE OF THE SAME

MANUFACTURER AND GRADE. 2) RECEPTACLES: ARROW HART 5362 FOR 20 AMPERES. GFCI SHALL BE #GFCS20 RATED 20 AMPERE, 120 VOLT. PROVIDE TAMPER RESISTANT AND MOISTURE RESISTANT TYPE WHERE REQUIRED BY NEC. DIMMERS: 600/1000/1500/2000 WATTS AS REQUIRED BY JOB CONDITIONS. LUTRON 'NOVA' SERIES OR EQUAL. DEVICE PLATES: ARROW HART SWITCH PLATES SI-S6 SERIES. ARROW HART RECEPTACLE PLATES S8. ARROW HART TELEPHONE BLANK PLATES S14.

N. MOUNT WEATHERPROOF DEVICES IN CAST METAL BOXES WITH GASKETED, SPRING-HINGED LID-TYPE LOCKING COVERS

O. THE ENTIRE ELECTRICAL SYSTEM SHALL BE SOLIDLY GROUNDED INCLUDING MAIN SERVICE EQUIPMENT, DISCONNECT SWITCHES, WIRING TROUGHS AND PULL BOXES, CONDUIT SYSTEM, OUTLET BOXES, MOTORS, ELECTRIC HEATING EQUIPMENT, LIGHTING FIXTURES, TRANSFORMERS, EMERGENCY SYSTEMS, UPS SYSTEMS, AND FIRE ALARM SYSTEMS. PROVIDE EQUIPMENT GROUNDING CONDUCTORS IN ALL BRANCH CIRCUITS AND FEEDERS SIZED IN ACCORDANCE WITH

Q. ALL BRANCH CIRCUITS SHALL BE RUN CONCEALED IN EXISTING AND NEW WALLS. CUT AND PATCH EXISTING WALLS AND

R. ALL D.C. WIRING SHALL BE #10 AWG MINIMUM.

GROUND, PHASE AND NEUTRAL CONDUCTORS SHALL BE PIG-TAILED IN OUTLET BOXES OR MULTI-OUTLET ASSEMBLY FOR RECEPTACLES SO THAT GROUND AND ELECTRICAL SERVICE WILL NOT BE DISRUPTED TO OTHER RECEPTACLES ON THE SAME MULTI-WIRE CIRCUIT IF RECEPTACLE IS REMOVED.

A. COORDINATE ALL SERVICE ENTRANCE WORK WITH THE ELECTRIC UTILITY.

DISTRIBUTE POWER AT 120/208V. 3 PHASE, 4 WIRE, LED LIGHTING, AIR CONDITIONING, ELECTRIC HEATING, MOTOR CIRCUITS, AND 120/208V FOR RECEPTACLES, INCANDESCENT LIGHTS AND SMALL MOTORS.

PANELBOARDS SHALL BE 120/208 VOLTS, THREE PHASE EMPLOYING BREAKERS MINIMUM 10,000 SYMMETRICAL AIC AT 120 VOLTS. FURNISH PANELBOARDS AS INDICATED ON DRAWINGS E6.0, E7.0 AND E7.1.

PANELBOARDS SHALL BE FACTORY ASSEMBLED WITH BOLT-ON TYPE CIRCUIT BREAKERS. BUSS SHALL BE ALUMINUM. PROVIDE 50% GROUND BUS BAR. PANELS CONNECTED TO K-RATED TRANSFORMERS SHALL HAVE 200% RATED NEUTRAL

PROVIDE THREE (3) 3/4 INCH SPARE CONDUITS FROM EACH RECESSED PANEL TO THE CEILING SPACE.

F. FUSES FOR SERVICE ENTRANCE EQUIPMENT SHALL BE U.L. LISTED CLASS L, J, OR RKI. FUSES FOR FEEDER CIRCUITS AND PANELBOARDS SHALL BE U.L. CLASS RKI FAST-ACTING TYPE. FUSES FOR MOTOR OVERCURRENT, MOTOR CONTROLLER, AND TRANSFORMER PROTECTION SHALL BE DUAL-ELEMENT, U.L. CLASS RKI TIME-DELAY TYPE

G. PROVIDE ENERGY EFFICIENT, NEMA TP-1, SELF-COOLED, DRY TYPE TRANSFORMERS OF KVA, PHASE, "K" AND VOLTAGE RATINGS AS INDICATED. TRANSFORMERS 15 KVA AND LESS SHALL HAVE A CLASS F INSULATION, 115 DEGREES C RISE. TRANSFORMERS ABOVE 15 KVA SHALL HAVE CLASS H INSULATION, 115 DEGREE C RISE. PROVIDE FOUR 2-1/2 TAPS BELOW TWO 2-1/2 TAPS ABOVE RATED PRIMARY VOLTAGE. TRANSFORMERS OF 150 KVA AND LESS SHALL BE RATED 45 DB, LARGER TRANSFORMERS SHALL BE RATED 55 DB. NEUTRALS AND NEUTRAL CONNECTIONS OF ALL "K" RATED DRY TYPE TRANSFORMERS SHALL BE 200% OF THE PHASE CONDUCTOR SIZE. TRANSFORMER SHALL BE HEVI-DUTY ELECTRIC COMPANY, GENERAL ELECTRIC, SORGEL, ACME OR HOWARD INDUSTRIES.

PROVIDE A COMPLETE LIGHTING FIXTURE AT EACH LOCATION INDICATED ON THE DRAWINGS. FIXTURES SHALL BE SPECIFIED ON THE LIGHTING FIXTURE SCHEDULE ON THE DRAWINGS.

ALL PLASTIC DIFFUSERS SHALL BE 100 PERCENT VIRGIN ACRYLIC (NOMINAL .125 INCH THICK) AND ALL LEXAN DIFFUSERS

C. 8-FOOT TANDEM UNITS MAY BE USED IN LIEU OF 4 FOOT UNITS IN CONTINUOUS ROWS.

THE CONTRACTOR SHALL CONSULT THE CEILING CONTRACTOR AND ARCHITECT'S DRAWINGS FOR APPROVED REFLECTED CEILING PLANS BEFORE ORDERING FIXTURES TO INSURE THAT ALL ARE COMPATIBLE WITH THE CEILING SYSTEM AND PROPERLY LOCATED. VERIFY THAT ADEQUATE CLEARANCE FOR INSTALLATION. MAINTENANCE, AND HEAT DISSIPATION IS

PROVIDE A MINIMUM OF TWO (2) GALVANIZED STEEL #12 GAUGE HANGER WIRES (ALTERNATE CORNERS) ON ALL

CONTRACTOR SHALL PROVIDE ADDITIONAL EXIT LIGHTS AND EMERGENCY BATTERY PACK WITH DUAL HEADS AS NEEDED TO MEET FIRE MARSHAL'S WALK-THROUGH AND ACCEPTANCE.

G. CONNECT EXIT LIGHTS, EMERGENCY BATTERY UNITS AND NIGHT LIGHTS (NL) TO UNSWITCHED PORTION OF LIGHTING

TELEPHONE SERVICE SHALL BE INSTALLED BY THE TELEPHONE COMPANY

PROVIDE WALL OUTLETS IN 4" SQUARE 2-1/8" DEEP BOX WITH RAISED SINGLE GANG COVERS EQUIPPED WITH BLANK STAINLESS STEEL DEVICE PLATES. EXTEND 3/4" EMPTY CONDUIT FROM EACH OUTLET TO THE CEILING SPACE AND TERMINATE WITH INSULATED BUSHINGS. PROVIDE NYLON PULL WIRE IN ALL CONDUITS LEFT EMPTY.



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SUITE 5268 479-636-5004 1805 N 2ND ST JOB NO.: 29894 ROGERS, AR 72756 DESIGNED BY: LHO

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PROJECT

CIRCLE K STORES, INC. DET CW **ANGIER** NC

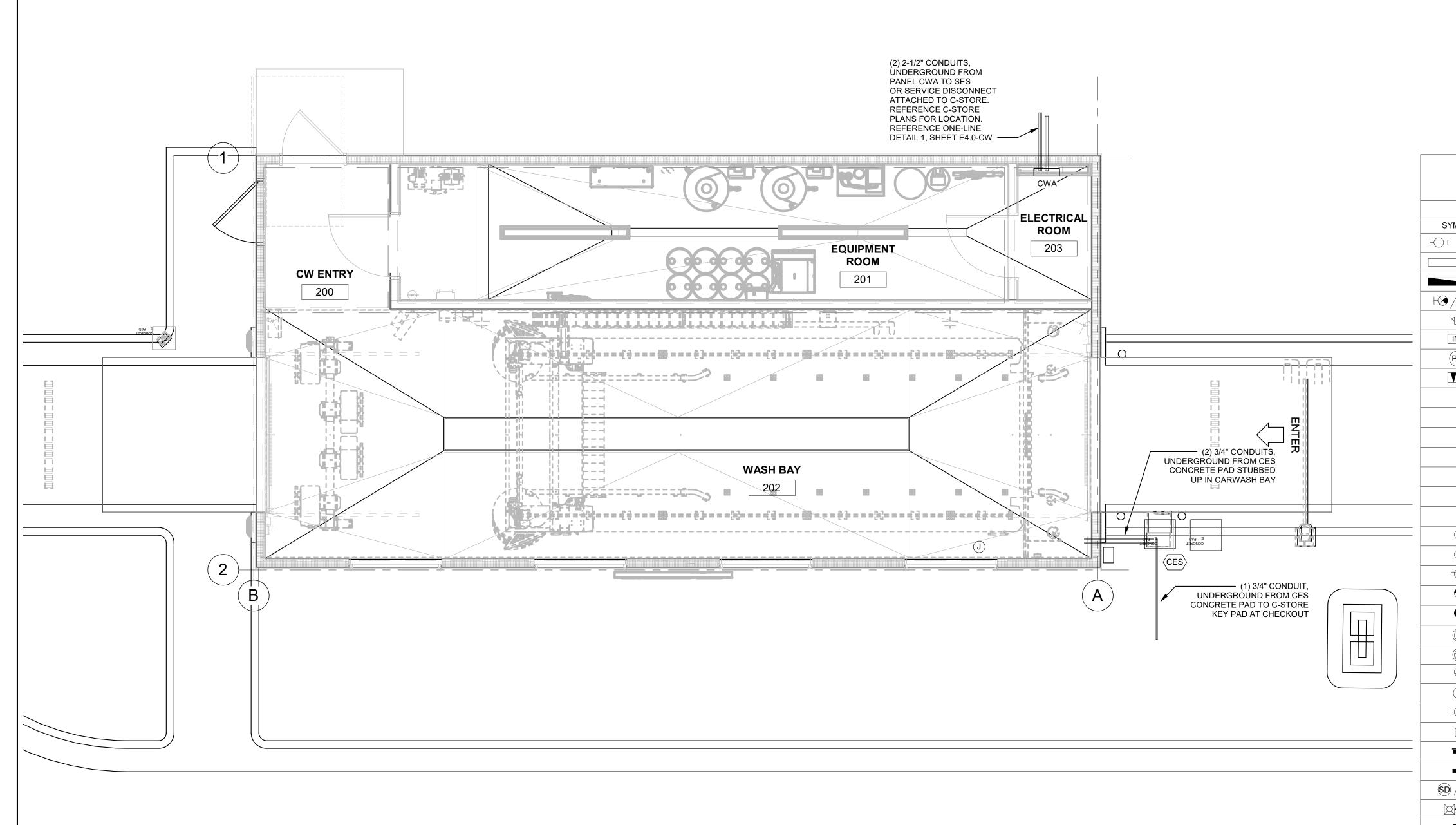
9706 KENNEBEC CHURCH ROAD. ANGIER, NC PROTOTYPE CYCLE # R3.2 12/19/22



CIRCLE K STORE PROJECT NUMBER: 22130

ELECTRICAL SPECIFICATIONS







ABBRE a, b, c AFF AFG C CCT CF CW EC EF ELECTRICAL CONTRACTOR EXHAUST FAN RH SC TR ETR EXISTING TO REMAIN EWC ELECTRIC WATER COOLER G GROUND GFEP GROUND FAULT EQUIPMENT PROTECTION GFI GROUND FAULT CIRCUIT WΗ INTERRUPTER

ISOLATED GROUND

GENERAL NOTES

- 1. ALL EXTERIOR DEVICES SHALL BE WEATHERPROOF.
- 2. PROVIDE ALL EMPTY CONDUITS WITH PULL STRING.
- ALL WIRING OUTSIDE SHALL BE A MINIMUM OF #10 COPPER WITH TYPE 'XHHW-2' INSULATION FOR UNDERGROUND CIRCUIT RUN IN PVC, PROVIDE A #10 COPPER BOND IN ADDITION TO CIRCUIT CONDUCTORS.
- ALL UNDERGROUND CABLE, PIPE AND CONDUITS SHALL BE DETECTABLE (METALLIC) OR HAVE A DETECTABLE UNDERGROUND DEVICE INSTALLED PER LOCAL CODES.



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CIRCLE K STORE PROJECT NUMBER: 22130





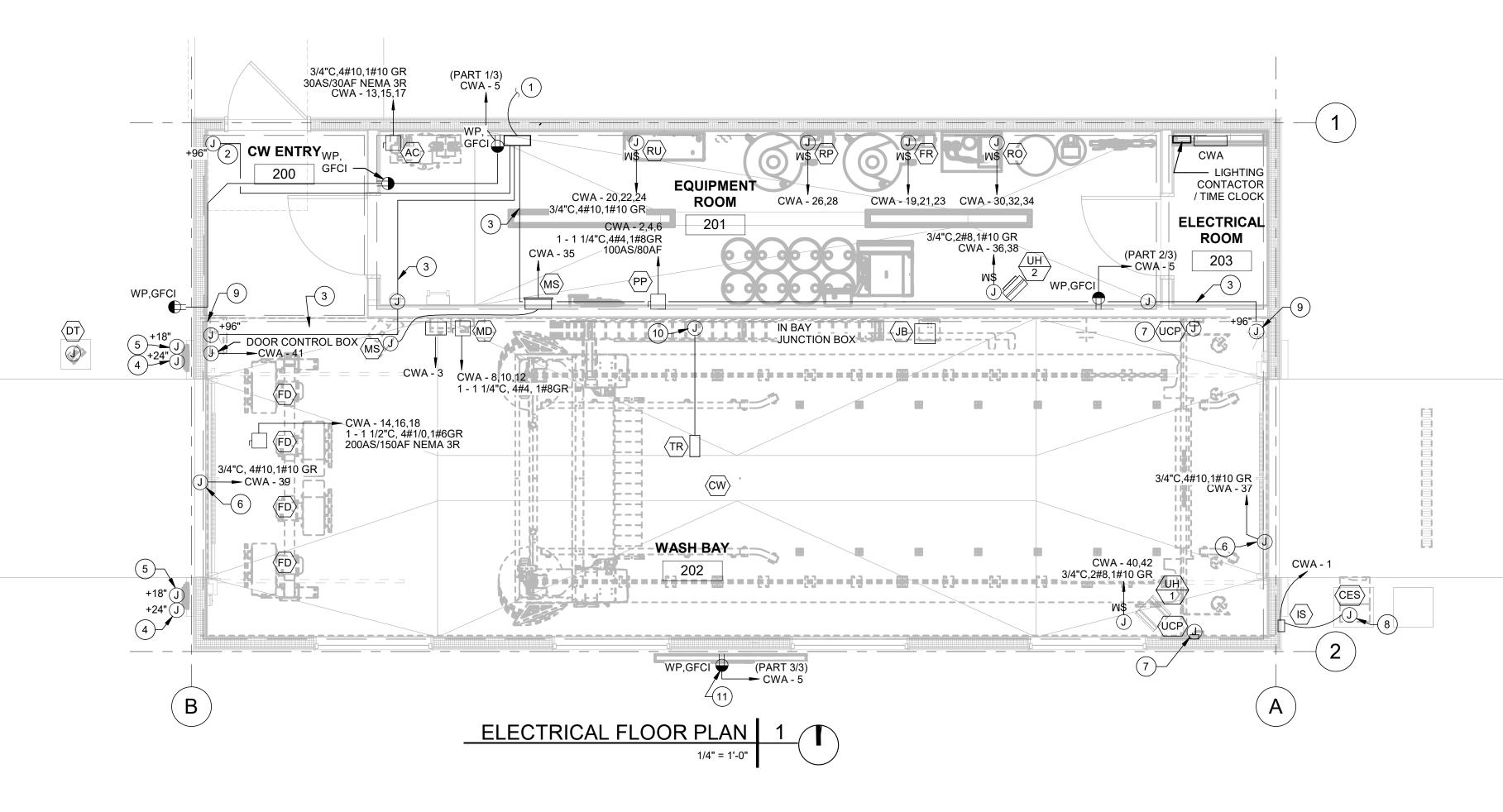
ELECTRICAL SYMBOLS LEGEND

		(SYMBOL	_S APP	PLY ONLY WHEN USED ON DRAWINGS)						
SYN	MBOL	DES	SCRIPT	ΓΙΟΝ						
ЮС		LIGHT FIXTURE (WALL MOUNTED/CEILIN	g Mou	INTED)						
	0	LIGHT FIXTURE		· · ·						
		LIGHT FIXTURE, NIGHT LI	IGHT							
	/ HX			INTEGRATED EMERGENCY LIGHTING						
/ 		(WALL MOUNTED/CEILING		/						
	NV	(WALL MOUNTED/CEILING		·						
	PE)			GE PHOTOCELL SENSOR, LEVITON "PCCSD-W" OR EQUAL.						
				IC OCCUPANCY SENSOR, LEVITON ODC0S-I1W WITH						
		POWER PACK OR EQUAL								
	\$	STANDARD 20A, SINGLE PHASE SPST TOGGLE SWITCH 3-WAY SWITCH								
	\$3									
	\$K	KEYED SWITCH								
	\$D			SE SLIDING TYPE SWITCH. LUTRON "NOVA-T" SERIES OR APPROVED IEUTRAL FOR EACH DIMMER CIRCUIT.						
	\$M	MANUAL MOTOR SWITCH								
	\$OS	SINGLE POLE OCCUPAN	CY							
	\$OS2	DOUBLE POLE OCCUPAN SENSOR SWITCH	ICY							
(\bigcirc	STANDARD 20A, 120V 1P	H GRO	UNDING TYPE SIMPLEX RECEPTACLE						
(\square	STANDARD 20A, 120V 1PH GROUNDING TYPE DUPLEX RECEPTACLE								
Ę	\mathbf{P}	STANDARD 20A, 120V 1PH GROUNDING TYPE QUADRUPLEX RECEPTACLE								
(\square	STANDARD 20A, 120V 1PH GROUNDING "GROUND FAULT INTERRUPTER" GFI RECEPTACLE								
(0	STANDARD 20A, 120V 1P	H ISOL	ATED GROUND TYPE DUPLEX RECEPTACLE, ORANGE IN COLOR						
((\mathbb{D}	STANDARD 20A, 120V 1PI OUTLET BOX	H GRO	UNDING TYPE DUPLEX RECEPTACLE MOUNTED IN FLUSH FLOOR						
((\bigcirc	STANDARD 20A, 120V 1P FLOOR OUTLET BOX	H GRO	UNDING TYPE QUADRUPLEX RECEPTACLE MOUNTED IN FLUSH						
(\mathbf{A}			Y NEMA CONFIGURATION WITH INSTALLED EQUIPMENT						
(J	JUNCTION BOX. SIZED B	Y THE	CONTRACTOR PER ACTUAL NUMBER OF CONDUITS AND / OR UGH. (WALL MOUNTED/CEILING MOUNTED)						
4)	CEILING MOUNTED RECE	EPTACI	LE, STANDARD 20A, 120V 1PH GROUNDING TYPE DUPLEX RECEPTACLE						
[DISCONNECT SWITCH, A	MPS, F	POLES AND FUSE SIZE AS SHOWN (FUSE SIZE CALLED OUT IF REQUIRED)						
T		FLUSH MOUNTED PANEL	BOARI	D, REFERENCE PANEL SCHEDULE FOR RATINGS AND COMPONENTS						
		SURFACE MOUNTED PAN	NELBO.	ARD, REFERENCE PANEL SCHEDULE FOR RATINGS AND COMPONENTS						
SD /	/ (SD)=	SMOKE DETECTOR / DUG	CT SMC	OKE DETECTOR						
Ø	<110cd	HORN / STROBE, CANDE	LA AS I	INDICATED, COORDINATE WITH FIRE ALARM PLANS						
	▼	TELEPHONE OUTLET WIT		RJ45 PORTS U.O.N., PROVIDE 3/4"C TO ACCESSIBLE CEILING SPACE						
7	$\overline{\nabla}$			DRTS U.O.N., PROVIDE 3/4"C TO ACCESSIBLE CEILING SPACE OR AS						
7	V	COMBINATION TELEPHO		ATA OUTLET WITH (4) RJ45 PORTS U.O.N., PROVIDE (2) 3/4"C TO R AS OTHERWISE INDICATED						
	•	SECURITY CAMERA BY C								
	VIATIONS									
		ASE LETTERS INDICATE	LCU	LIGHTING CONTROL						
SWITCHING CONFIGURATION ABOVE FINISHED FLOOR				UNIT NOT TO SCALE						
FG	ABOVE FIN	NISHED GRADE	NTS REC	REFRIGERATION						
СТ	CONDUIT CIRCUIT			ELECTRICAL CONTRACTOR						
F	CEILING F. CASH WR		RC	REFRIGERATION CONTRACTOR						
			RH	RADIANT HEATER						

RADIANT HEATER SECURITY CAMERA TAMPER RESISTANT TYP TYPICAL UH UNIT HEATER UNO UNLESS NOTED OTHERWISE WATER HEATER WEATHER PROOF WP WR WEATHER RESISTANT

SYMBOL	PART NUMBER	DESCRIPTION	POWER REQ. 120 VAC 1PH	POWER REQ. 208/230 VAC 1PH	POWER REQ. 230 VAC 3PH	CONTROL WIRING/ CONDUCTOR	INLET CONNECTION	OUTLET CONNECTION	WATER USAGE GPM	AIR CFM 90 PSI MIN	ESTIMATED WEIGHT (OPERATING SHIPPING)
		Totals: Disconnect size, not ventiled yet.	90	40	400						
AC	3950-1907	AIR COMPRESSOR, 5 HP 80 GALLON TANK-INGERSOL RAND, NEMA 1, WITH AIR DRAIN 120V	10		30			3/4" NPT			500
BSG	GU8042	BRUSH SIDE SPLASH GUARDS, DRIVER AND PASSENGER SIDE, (RED, WHITE,CUSTOM)									On Gantry
BWD		BAY WASH DOWN ASSEMBLY, GUN & HOSE						3/4" NPT			
СВ	3950-3903	CLEARANCE BAR-RETRACTABLE, DRIVER SIDE							<u> </u>		
CES		C-START, UNITEC, CAR WASH ENTRY SYSTEM	10			24 VAC, 18 G, 12 COND CATe5 CABLE INTERCOM 22G, 4 COND SHLD					95
CP0	7040-4161	CP0 CONTROLLER	(SUPPLIED WITH GANTRY)			FACTORY					
cw	GU1010	CHOICEWASH XT WITH INJECTOR SYSTEM			75				<u>.</u>	12 CFM @ 90 PSI	3400
DRB	SU3050 9150-0444 6370-0665	DRIVE THROUGH ROCKER BLASTERS						3/4" BARB	28 GPM @ 200 PSI (1)		
DR	7030-4142	DRYER CONTROL BOX -FS40/FS40D	15			24 VAC, 18 G, 2 COND					
DT	GU4230 GU4235 GU4240 GU4252	DRYER TIMER, SHROUD & 4' TALL STAND 0770-0017, 0070-0012, 5430-2207	QP		-	24 VAC, 18 G, 3 COND		-	2		
EC	SU4310	ENERGEY CHAIN FEED SYSTEM-OPEN									
EP		ELECTRICAL PANEL (NOT SUPPLIED BY MARK VII)						2			
ET		ENTRANCE TIMER, LED				24 VAC, 18 G, 3 COND					
FD	GU4125 7030-7086	FS-40D HP FREESTANDING DRYER WITH SIDE DOWN CHUTES			150	24 VAC, 18 G, 3 COND	0	8			1640
FR		RO FINAL RINSE PUMP-2 HP, 150 PSI Max			20			-	19 GPM @ 50 PSI		65
GD		BAYWATCH INTELLIWATCH PREMIUM DOOR SYSTEM	0	20		24VAC 18G, 4 COND SHLD, 10		2	s\$		
GR	SU4120 9150-0286	10-0 GUIDE RAILS, SST LOW PROFILE				COND SHLD					
GRP	6500-0000	GUIDE RAIL SAFETY POSTS									
HEC	GU1010 9150-0282	HIGH ENTRY CURVED GUIDE RAILS									
JB	7040-4010	IN BAY JUNCTION BOX	(SUPPLIED WITH GANTRY)								
M7+		MARK VII +, REMOTE MONITORING SYSTEM				24VAC POWER/RS23 FACTORY INSTALLED					
MD	0035-1596	MAIN DISCONNENT	(SUPPLIED WITH GANTRY)			INSTALLED					
MS	SU4580 9150-0356	MERCHANDISING SIGN - OFF BOARD WITH INTERFACE ENCLOSURE	15	50		24 VAC, 18 G, 8 COND	D.	· · · · ·			
PP		CHOICEWASH XT PUMPING PLANT STATION-20 HP/2530 CAT		-	75	24 VAC, 18 G, 20 COND	6			1.5 CFM @ 90 PSI	
RM	GU1010 3950- 3653 3950- 3654	REFLECTIVE MARKERS WADHESIVE									775
RO	3950-3803	REVERSE OSOMSIS UNIT - PURCLEAN PC 3000 GPD WITH FLOOR STAND			20		2X 1" WATER LINE W/ FPT		20 GPM @ 30 PSI		500
RP	3950-4136	RO REJECT CAPTURE PUMP, 1 1/2HP (CJ90F)		20				8	35 GPM @ 50 PSI		65
RU	3950-4024	RECLAIM UNIT- PURWATER 30 GPM PW1005M4O	20		30	COND FLOAT		(1) 1-1/2" WATER (2) 1" RETURN	30 GPM @ 40- 45 PSI		700
SF	5280-1050	SPOTFREE STORAGE TANK, 300 GAL 34.5" DIA X 82" TALL				CONTROLS	(1) 1/2" COND	3/4" BARB			Operating 2505, shippin 40
SFR	5280-1050	SPOTFREE REJECT STORAGE TANK, 300 GAL. 34.5" DIA X 82" TALL						3/4" BARB			Operating 2505, shippin 40
тк		TRACK-GANTRY-32' LOW PROFILE									
UC	SU3010 6530-0093	UNDERCARRIAGE WASH MANIFOLD WFLAT COVER					3/4" NPT		17 GPM @ 50- 80 PSI (1)		
UCP	SU3070 9150-0368	UNDERCARRIAGE PHOTO EYES- SENSORS RECEIVER & TRANSMITTER, CABLES & ENCLOSURES				24 VAC 18 G, 5 COND					
ws	5220-4009	WATER SOFTENER W/BRINE TANK, S- 151-B SINGLE	20				1 1/2" NPTF	3/4" DRAIN	40 GPM @ 25 PSI		1130

CAR WASH VENDOR EQUIPMENT LIST 3



NOTE: ALL ELECTRICAL EQUIPMENT IN CAR WASH SHALL BE NEMA-3R RATED. WASH BAY LIGHTING FIXTURES TO BE WET LOCATION RATED.

GENERAL NOTES

- . EXTERIOR BUILDING CIRCUITING TO BE A MINIMUM #10 AWG.
- 2. NO OUTLET RECEPTACLES ALLOWED IN CAR WASH BAY.
- 3. ALL CONDUITS TO BE BOTTOM FED IN THE WASH BAY AND SUPPORTED 1/2" AWAY FROM FINISHED WALLS.
- 4. ALL JUNCTION BOXES IN THE WASH BAY ARE TO BE FIBERGLASS.

KEYNOTES

- 1 PROVIDE 1" CONDUIT FROM CARWASH EQUIPMENT ROOM TO SECURITY MONITORING STATION. VERIFY EXACT LOCATION OF MONITORING STATION.
- 2 PROVIDE CONDUIT AND BOX FOR SURVEILANCE TELEVISION.
- 3 PROVIDE 1" CONDUIT FROM SECURITY CAMERAS TO CARWASH BAY EQUIPMENT ROOM. VERIFY LOCATION WITH PROJECT MANAGER.
- 4 PHOTOELECTRIC EYES CONNECTED TO EXIT DOOR CONTROL BOX. PROVIDED AND INSTALLED BY OVERHEAD DOOR INSTALLER. VERIFY CONTROL BOX LOCATION WITH DOOR INSTALLER.
- 5 JUNCTION BOX FOR EXTERIOR PHOTOELECTRIC EYE. PHOTOELECTRIC EYE PROVIDED WITH DOOR CONTROLLER.
- 6 PROVIDE 120-VOLT POWER FOR OVERHEAD DOOR. (EMERGENCY OPEN/CLOSE) DURING INSTALLATION REMOVE CORD AND PLUG AND HARD WIRE THE DEVICE ONLY. TYPICAL FOR ENTRY AND EXIT DOORS.
- 7 PROVIDE 3/4" CONDUIT FROM EACH SIDE OF THE CARWASH BAY TO MAIN CARWASH PANEL FOR SIDE ULTRASONICS. LOCATE 23 FEET FROM ENTRANCE END OF BAY. VERIFY LOCATION WITH VENDOR (RYKO).
- 8 PROVIDE POWER AND ASSOCIATED WIRING FOR CES. VERIFY WIRING REQUIREMENT WITH OWNER.
- 9 PROVIDE JUNCTION BOX FOR SECURITY CAMERA. ROUTE RIGID CONDUIT BETWEEN SECURITY CAMERA JUNCTION BOXES.
- 10 PROVIDE JUNCTION BOX AND PULL STRING IN 3/4" GRC FOR SYSTEM WIRING TO TREADABLE SENSOR PAD FROM CARWASH BAY JUNCTION BOX.
- 11 PROVIDE HORIZONTALLY MOUNTED RECESSED OUTLET BOX ASSEMBLY WITH DUPLEX GFI RECEPTACLE AND CLEAR "IN USE" WEATHERPROOF COVER. ARLINGTON INDUSTRIES DBH SERIES OR APPROVED EQUAL. VERIFY EXACT LOCATION WITH OWNER PRIOR TO INSTALLATION.



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 DESIGNED BY: LHO

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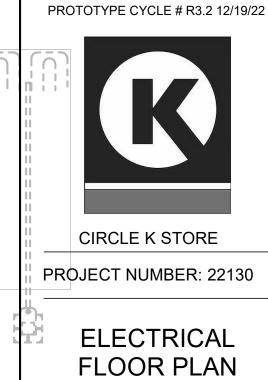
PROJECT SAG QUALITY SAG

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PROJECT

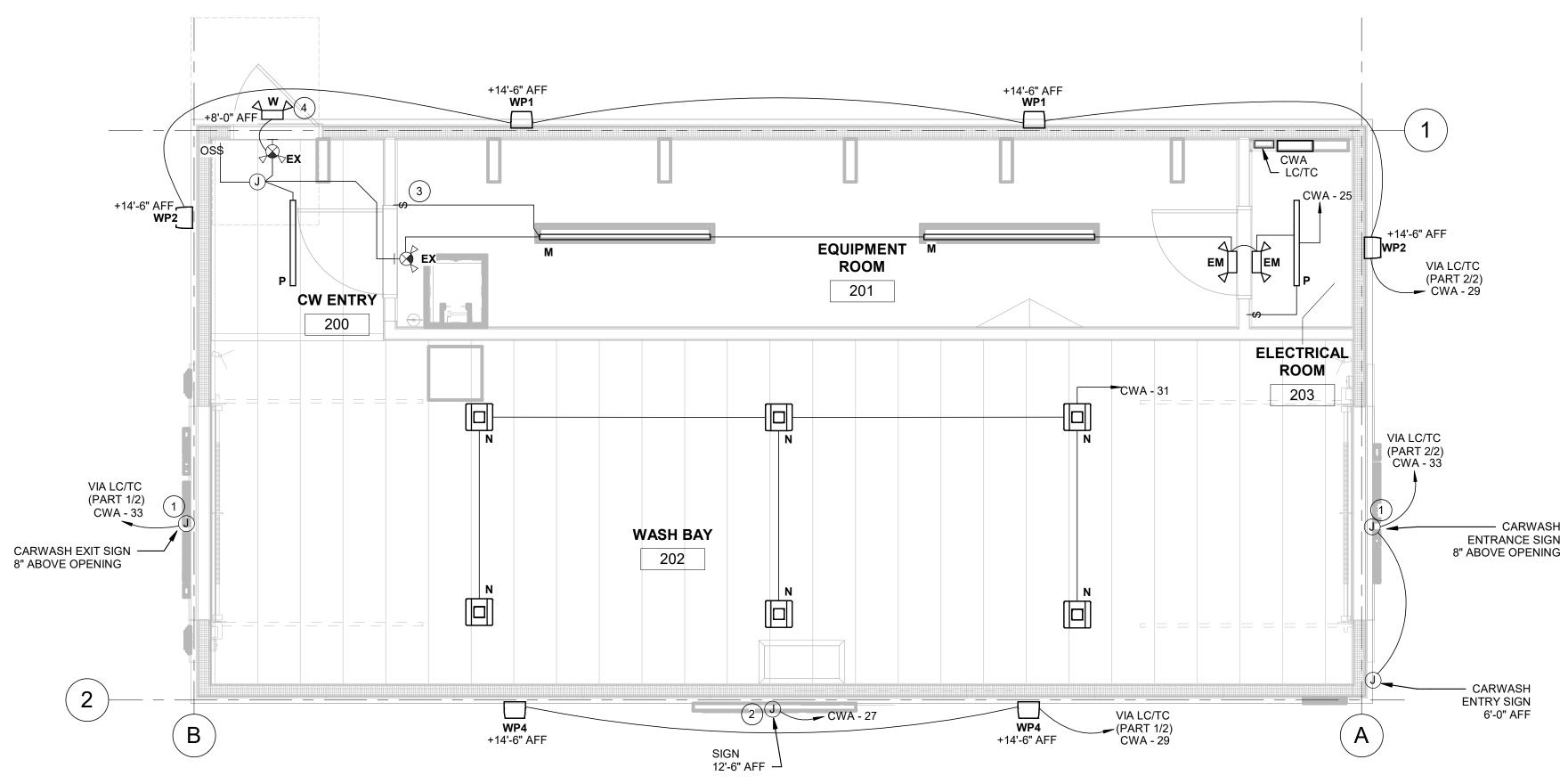
CIRCLE K STORES, INC. DET CW ANGIER, NC

9706 KENNEBEC CHURCH ROAD, ANGIER, NC



E2.0-CW

			CARWAS	H LIGHTING FIXTURE SCH	IEDULE	=					
ALL LIGH	LIGHTING FIXTURES ARE SUPPLIED BY CIRCLE K, INSTALLED BY THE ELECTRICAL CONTRACTOR										
TYPE	ITEM NAME	DESCRIPTION	MANUFACTURER	MODEL	LAMP	WATTS	VOLTAGE	COMMENTS	COUNT		
EM	INTERIOR LIGHTING	LED EMERGENCY DUAL HEAD	LIGHTALARMS	LCA-2LED	LED	12 W	120 V		2		
EX	INTERIOR LIGHTING	LED EXIT SIGN / EMERGENCY LIGHT COMBO	LIGHTALARMS	UQLXN500X-2LED	LED	4 W	120 V		2		
М	INTERIOR LIGHTING	8' LED LINEAR FIXTURE	CREE	LS8-120L-950-R-UL-10V	LED	96 W	120 V		2		
Ν	INTERIOR LIGHTING	DIRECT MOUNT FLAT LENS CANOPY FOR CARWASH	CREE	CPY250- B-DM-F-E-UL-WH-57K	LED	145 W	120 V	WET LOCATION RATED	6		
Р	INTERIOR LIGHTING	4' LED LINEAR FIXTURE	CREE	LS4-60L-950-R-UL-10V	LED	45 W	120 V		2		
WP1	EXTERIOR SITE LIGHTING	EXT. WALL PACK	CREE	XSPW-B-WM-2ME-2L-40K-UL-XX (SET @ 1.0V)	LED	25 W	120 V		2		
WP2	EXTERIOR SITE LIGHTING	EXT. WALL PACK	CREE	XSPW-B-WM-4ME-2L-40K-UL-XX (SET @ 1.0V)	LED	44 W	120 V		2		
WP4	EXTERIOR SITE LIGHTING	EXT. WALL PACK	CREE	XSPW-B-WM-4ME-8L-40K-UL-XX	LED	44 W	120 V		2		
w	EMERGENCY LIGHTING	WET-LISTED EMERGENCY REMOTE DUAL HEAD	LIGHTALARMS	CAM-SD-XX	LED	2 W	120 V	(2) 1W HEADS GRAY FINISH - 90 MINUTE REMOTE BATTERY BACKUP	1		



ELEC LIGHTING PLAN 1 1/4" = 1'-0"

NOTE: ALL ELECTRICAL EQUIPMENT IN CAR WASH SHALL BE NEMA-3R RATED. WASH BAY LIGHTING FIXTURES TO BE WET LOCATION RATED.

LIGHTING GENERAL NOTES

- A. THE EXIT, EMERGENCY AND NIGHT LIGHT FIXTURES SHALL NOT BE SWITCHED.
- B. EXTERIOR BUILDING CIRCUIT MINIMUM WIRE SIZE SHALL BE #10 AWG CU.
- C. ALL EXTERIOR DEVICES SHALL BE WEATHERPROOF RATED.
- D. ALL EMERGENCY EQUIPMENT SHALL BE LISTED TO UL924 AND BE INSTALLED PER NEC 700.

KEYNOTES

- PROVIDE JUNCTION BOX 8" ABOVE DOOR FOR 1 CARWASH ENTRANCE AND EXIT SIGNS. VERIFY EXACT LOCATION. PROVIDE 24-VOLT AC TRANSFORMER AND LOW VOLTAGE WIRING TO SIGNAGE VIA LIGHTING CONTACTOR AND TIME CLOCK.
- RECEPTACLE FOR OPTIONAL EXTERIOR "CIRCLE 2 K" SIGN. VERIFY EXACT MOUNTING LOCATION WITH ARCHITECTURAL ELEVATIONS.
- PROVIDE WATT STOPPER W2000H OCCUPANCY 3 SENSOR AND MAKE CONNECTION TO LIGHTING IN THIS ROOM.
- EMERGENCY BATTERY PACK (EBU1) LOCATED 4 INSIDE OF BUILDING FOR EMERGENCY EGRESS LIGHT ON EXTERIOR OF BUILDING ABOVE DOOR.



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DATE
02/10/23

Feb 15, 2023

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PROJECT SAG QUALITY SAG

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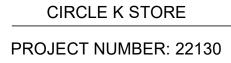
PROJECT

CIRCLE K STORES, INC. DET CW ANGIER, NC

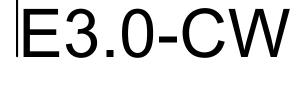
9706 KENNEBEC CHURCH ROAD, ANGIER, NC PROTOTYPE CYCLE # R3.2 12/19/22



CIRCLE K STORE

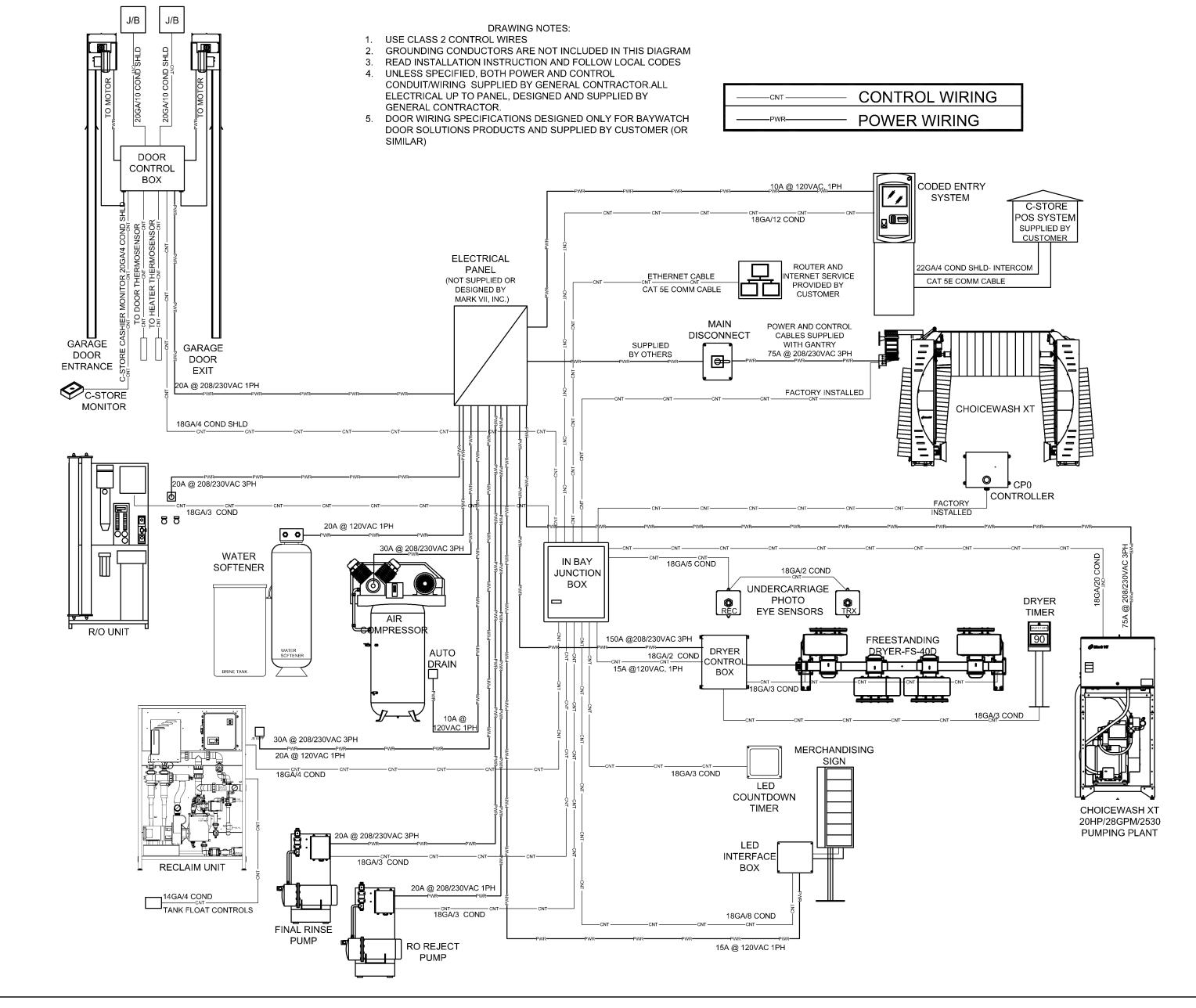


LIGHTING PLAN



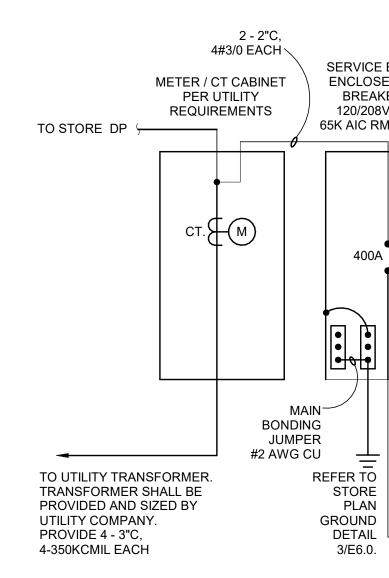


N.T.S.



PANELBOARD CWA			Bus Rating: 400 A						Main Rating Upstream: 400 A						Location: DIST. DP					
			Voltage: 208Y/120 V					Mains Type: M.C.B.					С.В.	Busbar Material: CU			GROL			
				System: 3Ø, 4W						A.I.C. Rating: 65,000 A				000 A	Ground Busbar: Yes			GR		
				Мо	unting	Cabin	et				Full	ly / Seri	es: Ser	ies	Neut	ral Busbar: 100%				
Statu	us: Nev	w			Trim	Door-	In-Doo	r		Brand	h Brea	aker Ty	pe: Boli	t-on	IG Grou	nd Busbar: No			BRKF	2
				Nema Rating: 3R							Feed Type: Bottom				Skirt Type: None			AMPS		
Furn	ished	by Owner, Installed by EC	Fe	ed Thru	u Luas:	NO						minatio				Sections: 1				
																			45.00	P
	Load Code	Load Description	Notes	Brkr Size	Poles		A		в		c	Poles	Brkr Size	Notes	Load Des	scription	Load Code	CCT No.	15-20	GF
1	3	CODE ENTRY BOX (CES)	2	20 A	1	0.96	7.13								CHOICEWASH PU			2		P
3	11	DRYER CONTROL BOX (DR)	2	20 A	1			0.03	7.13	_		3	80 A		STATION - 20HP (P		4	4	25-30	GF
5	2	CONVENIENCE RECPTS		20 A	1					0.90	7.13							6		
7		SPACE			1		9.01		0.01				00.4		CHOICEWASH XT	WITH INJECTOR		8		P
9		SPACE SPACE			1				9.01		9.01	3	80 A		SYSTEM (CW) (MD)	4	10	35-50	GI
11 13		SPACE			1	2 10	0.00				9.01							12 14		
15	4	AIR COMP 5 HP (AC)		30 A	3	2.10	0.00	2.10	0.00			3	150 A	9	FS-40D HP DRYER		4	14		P
17				0077				2.10	0.00	2.10	0.00	Ĭ	10071		CHUTES (FD) - 4 E	A 10HP MOTORS	-	18	60	GI
19						0.73	0.91											20		
21	4	FINAL RINSE BOOSTER PUMP (FR)		20 A	3			0.73	0.91			3	30 A		RECLAIM UNIT - PU	JRWATER (RU)	4	22		P
23										0.73	0.91							24	70	GI
25	10; 1	LTG EQUIPMENT/ELEC ROOM		20 A	1	0.39	1.44					2	20 A		RO REJECT CAPTI		4	26		
27	2	LTG CONTACTOR/TIMER (LC,TC)		20 A	1			0.36	1.44			2	20 A		RO REJECT CAPIT		4	28		F
29	10	EXT. SECURITY WALL PACKS		20 A	1					0.19	0.79							30	80-90	GF
31	1	WASH BAY LIGHTING		20 A	1	0.87	0.79					3	20 A		REVERSE OSMOS	IS UNIT (RO)	4	32		
33	10	EXIT/ENTRY SIGNS		20 A	1			1.41	0.79									34		F
35	3	MERCHANISING SIGN (MS)	2	20 A	1	0.05	0.50			1.00	2.50	2	35 A		UH - 2		4	36	100	GF
37	4	ENTRANCE GARAGE DOOR 1/2HP	2	30 A	1	2.35	2.50	0.05	0.75									38		
39 41	4	EXIT GARAGE DOOR 1/2HP GARAGE DOOR CONTROLLER	2	30 A 20 A	1			2.35	3.75	0.10	3.75	2	50 A		UH - 1		4	40	PER	NEC :
41	3	GARAGE DOOR CONTROLLER		Connec [®]		20	.18	20).01	-	<u> 3.75</u>).19	kVA						42		
		and Loads May Vary From Connected Because of Demand Factors	TOLAT		Amps:		3 A		0 A		3 A	Amps			Circuit Numberi	ng By Pole Position	Circuit			
Loa		es Load Classification	C	connect	ed Loa	d	Dem	and Fa	actor	Es	timate	d Dema	nd		Panel	Totals			20	A۱
	0	Lighting - Non-Continuous		0.0	00			0.00%			0.	.00								
	1	Lighting - Continuous		1.:	26		1	25.00%	6		1.	.58			Total Conn. Load:	88.39				
	2	Receptacles		1.:	26		1	00.00%	6		1.	.26			Total Est. Demand:	89.11				WIR
	3	Special Loads		2.	14		1	00.00%	6		2	.14			Total Conn.:					ENDE
	4	Motors			.10			00.00%				2.10			Total Est. Demand:				ТН	E FOL
	5	Kitchen (Commercial)		0.0				0.00%				.00								RE FC
	6	Heating			00			0.00%				.00								NGTH
	7	Cooling			00			0.00%				.00								20 VC
	9	Computer Outlets			00			0.00%				.00			Spare Capacity:	152 Δ				
	9 10	· ·		1.0				25.00%				.00		600-	e Capacity Percent:					-5 AM
	10	Exterior Lighting Miscellaneous - Continuous			03			25.00%				.00		Spare	- Capacity Fercent:	02			6	-10 AN
																			1	1-15 A
	12	Modular Furniture Outlets		0.	00			0.00%			0.	.00								

REFERENCE STORE PLANS FOR DETAIL IN THIS AREA



ROUND WIRE SIZING CHART

RKR /IPS		WIRE SIZE						
	PHASE	12	10	8	6	4		
-20	GROUND	12	10	8	6	4		
	PHASE	10	8	6	4	3		
-30	GROUND	10	8	6	4	3		
	PHASE	8	6	4	3	2		
-50	GROUND	10	8	4	4	4		
	PHASE	6	4	3	2	1		
60	GROUND	10	6	6	4	4		
- 0	PHASE	6	4	3	2	1		
70	GROUND	8	4	4	3	2		
	PHASE	4	3	2	1	1/0		
-90	GROUND	8	6	4	4	3		
	PHASE	3	2	1	1/0	2/0		
00	GROUND	8	6	4	4	3		
ER NEC 250.122(B)								

20A WIRE SIZING SCHEDULE

ALL WIRE SIZES SHOWN ON PANEL SCHEDULES ARE INTENDED TO BE MINIMUM ACCEPTABLE WIRE SIZE.

THE FOLLOWING SCHEDULE IS TO BE USED TO SIZE WIRE FOR 20 AMP CIRCUITS (120 AND 277 VOLT). LENGTHS (IN FEET) ARE INTENDED TO BE MAXIMUM.								
120 VOLT	#12	#10	#8	#6				
1-5 AMPS	200 FT.	325 FT.	490 FT.	770 FT.				
6-10 AMPS	100 FT.	160 FT.	245 FT.	385 FT.				
11-15 AMPS	70 FT.	110 FT.	165 FT.	255 FT.				
277 VOLT	#12	#10	#8	#6				
1-5 AMPS	480 FT.	760 FT.	1170 FT.	1865 FT.				
6-10 AMPS	240 FT.	380 FT.	585 FT.	930 FT.				

11-15 AMPS | 160 FT. | 250 FT. | 390 FT. | 620 FT.

GENERAL PANELBOARD NOTES

- CIRCUIT BREAKERS IN PANELBOARDS SHALL BE U.L. LISTED SERIES RATED WITH SPECIFIED 65K AIC UPSTREAM CIRCUIT BREAKER AND DOWNSTREAM 10K AIC RATED BRANCH CIRCUIT BREAKERS.
- PROVIDE A PERMANENT LABEL READING "CAUTION -SERIES RATED SYSTEM 65K, "X" AMPS AVAILABLE." IDENTIFIED (LABELED) REPLACEMENT COMPONENTS REQUIRED. (REFER TO SHORT CIRCUIT CALCULATIONS FOR ACTUAL AMPS TO BE LABELED).
- CIRCUIT BREAKERS SHALL BE A BOLT-ON TYPE, U.L. LISTED SERIES-RATED COMBINATION FROM PUBLISHED COMBINATION LISTINGS.

PANELBOARD **CIRCUIT NOTES**

- TERMINATE GROUND ON ISOLATED GROUND BUS.
- INSTALL LOCKING DEVICE ON BREAKER PER NEC (LOCK-OFF FOR MAINTENANCE).
- INSTALL LOCKING DEVICE ON BREAKER PER NEC (LOCK-ON FOR CRITICAL LOAD).
- 4. GFI BREAKER FOR PERSONNEL PROTECTION (5MA).
- REFER TO ONE-LINE DIAGRAM FOR CONDUCTOR

SIZES.

- PROVIDE LOCK-OFF DEVICE TO SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS PER NEC.
- FIRE ALARM CIRCUIT. PROVIDE RED MARKING AND LABEL "FIRE ALARM CIRCUIT CONTROL" ON BREAKER.
- OPTIONAL EQUIPMENT: REVISE TO FILLER SPACE IF NOT USED ON SITE.
- NON-COINCIDENTAL LOAD PER NEC 220.60. ELECTRICAL LOAD IS NOT SHOWN IN PANELBOARD SCHEDULE.



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PROJECT SAG QUALITY SAG DRAWN

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PROJECT

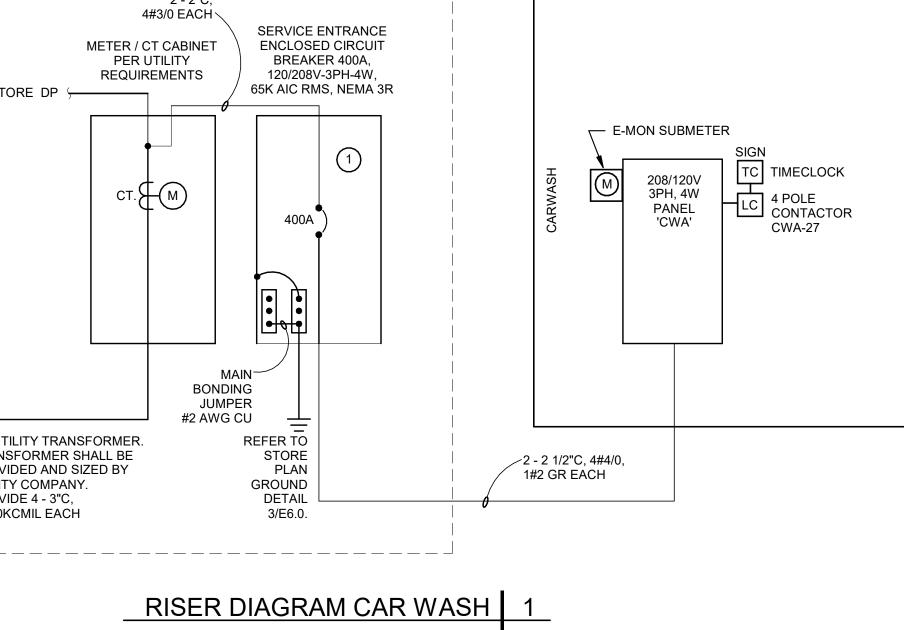
CIRCLE K STORES, INC. DET CW ANGIER, NC

9706 KENNEBEC CHURCH ROAD, ANGIER, NC PROTOTYPE CYCLE # R3.2 12/19/22



CIRCLE K STORE PROJECT NUMBER: 22130

> PANEL SCHEDULES, RISER AND DETAILS



E4.0-CW

N.T.S.

